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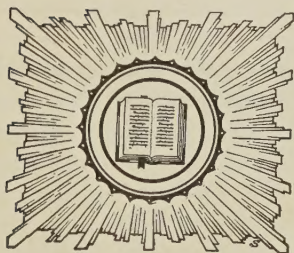
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# IMPROVEMENT OF BASIC READING ABILITIES

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*By Donald D. Durrell*

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Boston University



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## PREFACE

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THE title of this book might well have been "Classroom Provision for Individual Differences in Reading." Its premise is that every child will grow in interest and ability in reading when the instruction is adjusted to his needs. The rapid gains made in remedial instruction are the result of adjusting the instruction to the child's learning rate, his interests, his confusions and incorrect habits. When this is done in the regular classroom, the need for remedial classes rapidly diminishes. No reading system or set of basal readers makes the adjustments automatically; they must be made by the classroom teacher who observes individual differences and then plans suitable help.

Analysis of reading difficulties and efficient reading instruction require only children, books, and a teacher with ideas and initiative. Clinical instruments, psychiatric examinations, social histories, and psychological tests are more imposing than helpful. A teacher who knows how to identify difficulties at various stages of the child's progress, and can plan a variety of approaches to each step in learning to read, is the true "reading clinician." From such teachers we have gathered ideas, plans, materials, methods, devices, gadgets, which are effective for various situations. This book is our present collection.

Since our aim is to provide a practical handbook, the reader should not expect a research report with full documentation and many statistical tables and charts. It would be much more fun, and certainly more comforting to professional pride, to write a book on research in reading. Unfortunately, space limitations have dictated the omission

## PREFACE

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of the research on which are based many of the statements and recommended methods found in these pages.

I am especially grateful to Miss Helen Blair Sullivan, my associate at the Educational Clinic of the Boston University School of Education, who does most of the real work of our clinic. She has provided much illustrative material for this volume and most of the chapter on word analysis. I am indebted to Professor Donald Born, of our faculty, for his careful reading of proof. The leisure to write the first draft was provided one summer by Dr. Arthur I. Gates, who invited me to teach with him at Columbia University, where, as guest instructor, I had fewer duties than at home. Acknowledgments to others who have assisted will be found in the text. Without the generous coöperation of the administrative officers and teachers of public and private schools in Greater Boston, the work of our Educational Clinic would be impossible; the warm welcome that they have accorded us during many years is deeply appreciated.

A book of this kind is, after all, a substitute for direct conversation and demonstration — usually an inadequate substitute. We therefore extend to you who may be interested a cordial invitation to visit our Educational Clinic.

DONALD D. DURRELL



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## CHAPTER I

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### CHARACTERISTICS OF AN EFFECTIVE READING PROGRAM

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THERE is no one best way to teach reading. Despite the large number of publications on the teaching of reading — professional books, teachers' manuals, national committee reports, and research studies — we have not yet discovered a definite series of steps which a teacher may follow with the assurance that all pupils will grow in reading ability in the most efficient manner.

It is unlikely that research will ever discover a single method which will be the most efficient one for all pupils and all teachers. Differences among pupils in intelligence, in physical and mental background, and in immediate and future needs; variations in abilities and interests of teachers; and differences in instructional needs for various communities and at various times make highly unlikely the discovery of a single most effective method or course of study. A class of fifty children with a wide range of abilities in an impoverished community presents a teaching problem quite different from that of a class of twenty children of uniformly high ability in a favored community. One teacher may obtain best results with a systematic program for developing basic reading skills, while another does equally well with an informal program which emphasizes individual tastes and interests of pupils. A fine school library or easy access to children's books in public libraries makes possible an enriched program of extensive reading, while a limited supply of books might call for an intensive instructional program. The subject-matter emphasis in a rural community might well differ markedly from that in

a large city. In planning a program for most effective instruction, many such factors must be taken into account.

### RECOGNIZING INDIVIDUAL DIFFERENCES

Adapting instruction to individual differences and needs of pupils is a problem so new to education that we have hardly made a beginning in solving it. It is comparatively recently that individual differences have even been recognized in education; formerly the child who could not conform to the classroom instruction offered simply dropped out of school. As late as 1902, the United States Bureau of Education reported that only 10 per cent of children entering first grade survived to enter high school. While this low figure may be accounted for by the lack of facilities for schooling or by ample opportunities for employment, it is safe to say that large numbers of children left school because they were unable to adapt themselves to the instruction. At the present time, approximately 70 per cent of American children reach high school. This tremendous increase in school enrollment probably means that we are now holding in school large numbers of children who formerly would not have been considered suitable for formal education.

We may well consider what this change in the holding power of the schools means for classroom instruction. If only the best 10 per cent of children of school age attended school, a single curriculum and a fairly uniform course of study might be justifiable. All pupils in the third grade might be expected to read the third reader, and a single geography textbook might be suited to all fifth-grade pupils. Such pupils would be able to find their own way out of difficulties they encountered and would learn merely by being given the opportunity and being held to standards. But that condition does not now exist. In the same classroom with the bright children who learn without effort

are children who are much lower in mental ability. The range of educational achievement and mental age in a typical fourth grade is about the same as one would find in an entire one-room rural school. Yet attempts are still made to mold all these pupils to a single instructional program. A single basal reader, one history textbook, or one level of arithmetic is expected to fit all pupils. Adaptation of instruction to different levels of abilities, to different rates of learning, and to varied pupil needs is still widely ignored.

There is no simple solution of the problem of providing for individual differences in reading ability. We are ignorant of too many important factors. We do not yet know exactly the abilities essential for reading readiness at the first-grade level. The relative merits of different approaches in beginning reading are not known. We have many guesses but no exact knowledge as to why boys have more difficulty in reading than do girls of equal maturity. There is much confusion in regard to the essential reading skills above the third-grade level. The order of difficulty of steps in reading comprehension and recall has not been worked out. We have no basis for predicting the amount of practice required to develop any skill for a single level of mental ability, or for anticipating the types of errors and confusions that a reading method will produce. Research will eventually give us answers to many of these problems, but meanwhile we must make the best adjustments we can.

No exact, final procedure for handling individual differences in reading ability can, therefore, be presented in this book. An attempt has been made to present practices that have been found helpful in meeting problems that commonly appear. The teacher must judge whether these procedures are suitable for the individual needs of the class. The sole guide in deciding upon use of a certain method is, "Will it improve the reading of this child or this group of children?" Whether a method is "old-fashioned" or "progressive" or follows a "correct psychological principle"

should be of little concern. An observant teacher will notice that psychological principles are plentiful and that one may be found to justify almost any educational practice.

### PROCEDURES FOR BASIC SKILLS

A teaching plan or procedure is by nature an experiment. To judge its success in the teaching of reading, two factors must be considered: its efficiency in improving reading abilities and its power to establish the desire for reading. If, following the use of a given method, the reading-achievement scores on reliable standard tests indicate that the children are reading up to capacity and if it is evident that a great deal of well-planned voluntary reading is under way, the classroom procedure employed is generally satisfactory.

The following paragraphs, which describe the characteristics of an effective reading program, provide a composite picture of the practices observed in the classrooms of many superior teachers. No teacher need feel inferior because her program of instruction does not contain all these elements. A teacher may do effective work by combining only a few of the recommended practices or even by using only one in a superior fashion. The teacher should determine which of the practices are already in her teaching repertory and which might easily be included in it.

1. *The teacher is familiar with the individual differences of her pupils.* This implies more than a vague knowledge of home background, personality and emotional problems, and reading-achievement level. The teacher should have definite knowledge, preferably reinforced by a chart, of the specific abilities and habits in reading that have been determined by systematic observation and test results. It is on the basis of such specific knowledge of individual differences that the teacher is able to state exactly the requirements for each child with respect to meeting the reading objectives for the grade.



2. *The teacher has specific objectives for each child or each group of children in her class.* A knowledge of children's needs is of little value unless it is translated into definite lesson plans and objectives. When this is done properly, the teacher is able to give an immediate and specific answer to the question, "What are you doing for this child?" For example, with a group of poor readers in second grade the teacher is able to say that a certain basic sight vocabulary is being established; that definite activities are being followed to enrich word meaning so that there may be the necessary experience to understand the words and concepts included in the story; that known weaknesses in word analysis are being overcome by a specific program of instruction; that improved phrase reading and improved expression are encouraged by certain exercises; that an attempt is being made to reduce faulty mechanical habits, such as lip movement, whispering, finger pointing, etc.; that attention in silent reading is being increased through the use of various games and exercises; that the ability to persist at the reading task is being encouraged by graded exercises and a proper program of motivation. For a group of bright children the teacher may show that a definite program is being followed to stimulate each child's varied reading interests in poetry, drama, science, art, myths and fairy tales, history, travel, adventure, etc.; that special assignments in the content subjects are used, which later will serve to enrich the class work for the other pupils; that the children are learning how to use reference materials; that they are learning the art of directing their own leisure reading intelligently; that they are learning how to make interesting and colorful reports to other members of the class. For a particular child the plan may include the overcoming of timidity in oral reading or the curing of a "bookworm" who uses reading as a substitute for daydreaming.

3. *There is a definite plan for observation of pupils' growth in voluntary reading habits.* The teacher keeps

in touch with the child's outside reading by informal conversation or an occasional question. Through a wide knowledge of children's books the teacher is able to talk with a child about the book he has just read, about specific characters or interesting situations, and is able to suggest other books or stories which the child might enjoy. Pupils are encouraged to make records for their own use of the books that they have read. These records may be on cards or in notebooks and may contain, in addition to the title and the author of the story, the names of the leading characters, the general plot of the story, and any other items which seem to be of special interest to the child.

4. *The teacher knows the books that are available to the children.* First, she is thoroughly familiar with all the books which are represented in her classroom, their difficulty levels and their suitability for different children and different uses. In addition she knows books on various difficulty levels and on different subjects that are available through the public library or through the loan library to which she has access. She protects the pride of the slow learner by not using books which have been studied in the lower grades, and she recognizes the rights of teachers in the grades above by selecting for bright pupils books which will not ordinarily be used in later grades. The teacher also has lists of stories on different levels which are suitable for use with various units of the classroom work. There is concrete provision for adding to the collection of reading material and pictures in the classroom, including a specific list of books suitable for future purchase, the list being prepared in relation to the instructional needs of the class. In the primary grades the teacher knows the order of difficulty of the various supplementary and basal readers, so that the child may be guided from the basal book to other books of the same level which have increasingly difficult vocabularies.

5. *There is adequate provision for differences in the*

*reading abilities of the pupils.* In several ways the reading program takes into account the wide range of individual differences among members of the class. Small groups of children at similar levels of reading ability are organized. Special remedial instruction is given to groups of children with common handicaps; bright children are encouraged to do independent reading for various purposes; workbooks and job sheets are used to overcome special weaknesses; unit assignments in the content subjects recognize different levels of reading achievement so that every child may contribute to the classroom work.

6. *The teacher has definite plans for motivation of reading.* The reading is dominated by activities in which all the class take part. These include planning assembly programs, exhibits, demonstrations, dramatizations, field trips to be taken later; running a class newspaper; keeping a constantly changing bulletin board devoted to various special subjects; and other projects that serve to make reading a tool in obtaining personal satisfaction. Unfair competition is removed by differences in assignments, so that regardless of his reading ability, the child may make a unique contribution to the classroom discussion or project. Other types of motivation also are in evidence, such as assignments that recognize appropriate seasonal activities or utilize out-of-school interests of pupils. Records of progress in the basic skills are kept so that each child can see his improvement. In the early stages of reading, even day-to-day progress in word recognition and in overcoming of difficulties is made evident to the child. Contests and special rewards are used sparingly, if at all. The lower forms of motivation, such as punishment, restriction, reminders of ultimate failure, etc., seldom appear.

7. *There is full attention to growth in vocabulary.* The effective reading program always provides for three phases of vocabulary growth — meaning, recognition, and analysis. When a selection is to be read by several members of the

group, there is a definite plan for teaching the meanings of unknown words. Exercises to enrich word meaning are suited to the ability of the group, and activities are planned in relation to the need for specific experiences. For example, if a great deal of reading about farm life is to be done in a city school system in which children have no farm experiences, projects and trips are planned to make the reading more meaningful. The teacher avoids activities that merely reproduce on a less satisfactory basis the experiences which the children have already had. Growth in word recognition is carefully watched, particularly in the primary grades. Oral-reading tests, consisting of paragraphs that include recently taught words, reveal to the teacher whether the child is adding these words to his sight vocabulary. Differences in rates of learning new words are taken care of by supplementary materials, self-administering games, workbooks, and a variety of devices which give the child interesting practice in recognizing new words at sight. Those skills through which the child may independently learn new words — add to his own vocabulary growth — are developed and their use encouraged by definite instructional periods. This training for self-help may consist of exercises in visual and auditory perception of word elements, the use of the dictionary, ability to derive word meaning from the context, word building, syllable analysis, and other forms of word study. Most of the exercises in word analysis are attached to the spelling lesson rather than to the reading lesson, and there is a proper unification of the vocabulary work in reading, spelling, writing, and composition.

8. *Oral-reading instruction is made effective by maintaining interest.* The first characteristic of effective instruction in oral reading is the maintenance of interest of the listeners in the content of the story being read. Interest is obtained by protecting the audience from having to listen to inadequately prepared reading or to stories with which



they are already familiar and which they do not care to hear again, and by relieving them of the necessity of keeping their eyes fixed on the story that is being read by another child. New material, short selections about matters of special interest to the class, dramatized material, and other types of stories chosen to appeal to the whole class provide the basis for oral reading. Special exercises are given to pupils who need help in phrasing, voice, enunciation, and expression. Children are taught how to select materials which are suitable for oral reading.

9. *The instruction in silent reading is characterized by insight into many problems and needs.* The first concern in silent reading is to make sure that the child can maintain his attention. When a child has difficulty in maintaining attention, the effective classroom teacher does not rely upon general suggestions to him to pay more attention or to work harder; she provides specific graded exercises designed to overcome chronic inattention and to prolong the attention span in silent reading. Increase in speed of silent reading is encouraged by simple narrative reading, aided by speed tests given often enough to keep the child's attention on the need for rapid reading. However, rapid reading is not encouraged in situations where it is out of place. Children with faulty habits, such as lip movement and whispering, are aided in overcoming their difficulty by suitable exercises. In all silent-reading instruction the teacher, of course, takes care of different levels of reading ability and pays close attention to the problem of establishing habits of voluntary purposeful reading.

10. *There is training in oral and written recall.* The teacher studies the difficulties of children in voluntary oral and written recall of material that they have read. The child who is unable to tell either orally or in writing the content of a story that he has read is given specific help. He is encouraged in various ways to talk about the interesting points of the stories which he has read — through in-

formal talks with the teacher or with other pupils, through oral reports in the classroom, or through library clubs.

11. *There is definite instruction for improvement of study skills.* The program and the teaching procedures are varied, for the skills with which the teacher is concerned are of distinctly different types in respect to reading habits. A group of skills is developed in intensive reading for the purposes of making accurate, complete, and well-organized summaries, of noting details, of selecting major ideas, of following directions, and of other study assignments that demand careful reading. The tendency of training in such skills is to produce slavish and slow reading which is offset by lessons in how to skim, how to locate relevant material, and how to adjust the rate and type of reading to the assignment. In addition, the tendency toward slavish recall is offset by other training which demands thinking on the part of the pupil — by the use of exercises requiring attention to the criticism, application, and evaluation of what is read. The program for development of all these skills employs well-motivated, well-graded lessons and exercises; it is definite and carefully planned; it is adjusted to those children who show on informal tests the need for the exercises. Children who do not need such training are freed from the instruction. In addition, pupils are given help in the use of tables of contents and indexes, and in the use of card catalogues and other bibliographical references, especially when independent reading and research are being sponsored.

### REACHING THE BROADER OBJECTIVES

Our ultimate objective in reading instruction is the intelligent *use* of reading. Many studies demonstrate that our present reading program fails badly in this regard. The general conclusion to be drawn from investigations relating to the use of reading by children and adults is that

voluntary reading follows no plan and is generally used as an escape from reality, a substitute for daydreaming.<sup>1</sup> A program to develop the basic abilities may still leave the pupil incompetent to use reading to good advantage, and if this is the case, an elaborate structure for teaching basic abilities is largely wasted.

Failure to establish desirable permanent reading habits may be due in part to an overconcern on the part of the teacher about literary objectives. There is undoubtedly a high value in a reasonably common literary background for children. The emotional rewards from good reading, as well as a deeper understanding of customs, problems, and desires of other people, are intensely valuable. However, it is possible that delight in "good literature" may be acquired only by a selected minority, just as are delights in certain musical and artistic forms. The contemplative values of reading are perhaps too difficult and unexciting for many minds. For them, reading may descend to a level of effortless daydreaming or vicarious thrills. In any case, the literary objective is only one of many reading objectives, and the teacher of literature carries only a part of the responsibility for establishing permanent interests in reading.

The development of permanent habits in the use of reading depends largely on the methods of teaching employed in the content subjects. It is in subjects such as science, art, music, practical arts, physical education, history, and geography that reading may be employed for its highest practical value, that of getting the child closer to life through giving the background for appreciative observation, intelligent planning, and well-directed action. In these subjects, properly taught, the child will learn to turn to reading as one source of help in solving numerous practical problems.

<sup>1</sup> Durrell, D. D. "Increasing the Effectiveness of Voluntary Reading." *Harvard Educational Review*, Vol. 9 (May, 1939), pages 307-315.

Reading can be helpful in one's activities as a consumer — the purchase of clothing, furniture, food, utensils, and services — aiding in more discriminative buying as well as in use and care of things purchased. It can aid in activities related to maintenance of health and prevention of accidents. One can turn to reading for greater values from music, fine arts, and various types of crafts. It will provide enrichment of travel and greater pleasure in hobbies, athletics, and other forms of recreation. It can be helpful in social relationships and in many kinds of personal problems. In summary, our highest objective for reading — the enrichment of living — is best reached through the teaching of subjects other than reading.

Several factors militate against the establishment of permanent reading habits through the content subjects. The uniform assignment is perhaps the outstanding one of these. Through uniform assignments the slow learner experiences constant failure and dissatisfaction, while the superior pupil becomes content with fragmentary knowledge which costs him little effort. Recitation from uniform assignments is highly competitive, and in place of the mutual pleasure in exchange of ideas, we find a destructively critical attitude toward the contributions of others. If the major part of reading and study in content subjects consists of competitive assignments, it would be surprising if voluntary reading habits came as a result.

A second factor connected with assignments is that the initiative for planning the reading program is seldom taken by the pupil. Habits of self-direction are acquired only by practice and pleasure in self-direction. While group planning provides some practice in self-direction, the individual must learn not to lean on others for all his planning. After sixteen years of following assignments in school and college, the college graduate is often a helpless novice in his voluntary reading. He needs a book-selection club to choose his reading for him.



A third factor that influences reading habits adversely is that most courses of study in the content subjects consist of samples of knowledge. This sampling is evident in books of history, geography, and science, which may devote one column to the Belgian Congo, a half-chapter to the Reconstruction Period, and three paragraphs to the four-cycle engine. Courses in literature are often similar in type, giving a page of small type to the life of an author, followed by a single essay or a fraction of a poem. The primary purpose of such courses is to cover the ground and to stimulate interests. The result of such superficial presentation may well be superficial knowledge, rapid forgetting, and a level of comprehension so low that the reader cannot use the ideas in conversation, observation, or thinking. As we attempt to build tastes, we are also establishing the habit of postponing the pursuit of those tastes.

Lack of association between verbal subjects and life outside the classroom also stands in the way of proper habit formation in reading. If the reading is related to observation of objects and situations in the child's experience, to planning and thinking in relation to immediate problems, and to conversation and action, it is likely to be found a useful tool. The world of the child, particularly in the elementary school, is a sensory-motor world; he is interested in things that he can see, hear, touch, taste, make, plan, do, and try. A child manifests little concern about experiences that are remote in time or distance and that do not concern his immediate welfare. Much of the social-studies material falls into this category of remoteness, despite the fact that its final objective is the appreciation of and participation in community life.

Gradual reform of classroom assignments, activities, and discussions is removing many of the handicaps to the development of desirable voluntary reading habits. The problem method and the unit assignment allow for a wide range of individual reading, with adjustments being made to read-

ing level and interests. Field trips, construction, dramatization, and visual aids of various kinds will help to make the reading more important in the enrichment of immediate activities. Group and individual projects as part of the regular instruction in content subjects aid in giving the pupil experience in planning his own reading program. The introduction of practical arts and crafts and the inclusion of well-chosen problems of high interest in traditional subjects add to the vividness of reading and study. Newspapers, encyclopedias, catalogues, current magazines, and reference materials are coming more frequently into the classroom. Public libraries and the schools are working in closer coöperation. It is regrettable that these reforms are found more often in the writings and addresses of educational enthusiasts than in the classroom; yet many schools provide us with a basis for optimism.

Extracurricular activities and some of the less academic subjects may arouse pleasure in the voluntary use of reading. Athletic libraries rarely need artificial motivation, nor do books of mechanics or crafts. Books dealing with popular hobbies such as airplane building, photography, and outdoor life rarely gather dust on the shelves. Books on etiquette, dress, personality, home decoration, entertaining, and household arts are in demand among appropriate age groups. The drama clubs, musical organizations, newspaper staffs, and other school organizations provide possibilities for development of permanent reading interests. Vocational-guidance counselors and other personnel officers have opportunities for encouraging reading interests. In fact, every member of the school staff should be enlisted in the effort to arouse in the child a full consciousness of the delights and the practical values of reading.

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- GRAY, W. S., and LIEK, E. B. *Elson-Gray Basic Readers*. Scott, Foresman & Co., Chicago; 1936.
- HAHN, JULIA. *Child Development Readers*. Houghton Mifflin Company, Boston; 1935.
- O'DONNELL, MABEL, and CAREY, ALICE. *The Alice and Jerry Books*. Row, Peterson & Co., Evanston, Illinois; 1936.
- SMITH, NILA B. *The Unit-Activity Reading Series*. Silver, Burdett & Co., New York; 1935.

The best historical treatment of reading in America is:

- SMITH, NILA B. *American Reading Instruction*. Silver, Burdett & Co., New York; 1934.

### NOTE IN REGARD TO REFERENCES

The references at the end of each chapter are to books and monographs, rather than to magazine articles, and a relatively

## BASIC READING ABILITIES

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small number of books are used. The following five books would serve as a minimum reference shelf:

- BETTS, E. A. *The Prevention and Correction of Reading Difficulties*. Row, Peterson & Co., Evanston, Illinois; 1936.
- GATES, A. I. *The Improvement of Reading* (Revised Edition). The Macmillan Company, New York; 1935.
- McKEE, PAUL. *Reading and Literature in the Elementary School*. Houghton Mifflin Company, Boston; 1934.
- National Society for the Study of Education. *Thirty-Sixth Yearbook, Part I. The Teaching of Reading: A Second Report*. Public School Publishing Company, Bloomington, Illinois; 1937.
- STONE, C. R. *Better Primary Reading*. Webster Publishing Company, St. Louis; 1936.

Some of the best references on the teaching of reading are, however, to be found in educational periodicals. The teacher who is able to consult a good library of such periodicals will discover the usefulness of the following bibliographical sources:

1. Bibliographies in doctorate theses on reading often refer to interesting and useful articles. Files of such theses from Columbia University, University of Iowa, University of Illinois, and other universities are usually to be found in educational libraries.
2. GRAY, W. S. *Summary of Investigations Relating to Reading*, published annually since 1933 in February and March issues of *The Journal of Educational Research*. Between 1925 and 1933 they appeared in *The Elementary Journal*. A single monograph of summaries prior to 1925, edited by Doctor Gray, was published by the University of Chicago Press.
3. *Psychological Abstracts*. Published monthly, these abstracts are invaluable for discovering articles on special psychological problems related to reading.
4. Special bulletins relating to reading or elementary school subjects. Some of these are:
  - a. *Better Reading Instruction*, Research Bulletin No. 5. National Education Association, Washington, D. C.; 1935.
  - b. DURRELL, D. D. *Research Problems in Reading in the Elementary School*. Scott, Foresman & Co., Chicago; 1936.
  - c. *Review of Educational Research*. "Special Methods and Psychology of the Elementary School Subjects," Vol. VII, No. 5 (December, 1937).
  - d. SEEGARS, J. C. *Vocabulary Problems in the Elementary School*. Scott, Foresman & Co., Chicago; 1939.
  - e. *The Implications of Research for the Classroom Teacher*, Chapter VIII. National Education Association, Washington, D. C.; 1939.



## AN EFFECTIVE PROGRAM

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5. *The Education Index*, published monthly since 1929 and compiled in volumes by the H. W. Wilson Company. This is the best single source for locating magazine articles pertinent to any school subject or problem. Any competent student will consult it constantly.
6. *The Union List of Serials* will aid in locating the nearest library source of any magazine not in the local library.

Research studies in reading and other school subjects, published and unpublished, appear in the United States Office of Education's *Summaries of Research Studies in Education*. Unpublished theses can usually be obtained by inter-library loan.

*The United States Catalog*, on file in all libraries, lists all books published in the United States. Title, author, publisher, date of publication, price, and other information in regard to any book may be found there.

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## CHAPTER 2

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### DISCOVERING INDIVIDUAL DIFFERENCES IN READING

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**I**NFORMAL tests based upon the reading materials used in the classroom and charts of faulty habits and difficulties observed when the child is reading provide the best basis for planning effective instruction. They indicate whether or not the assignments are suited to the child's reading maturity and whether instruction is being provided to overcome the specific confusions and faulty habits that arise in the child's daily reading. The teacher who will take the time to prepare and give the kinds of informal tests described in this chapter can obtain relatively precise knowledge of the instructional needs of her pupils in reading. The use of more refined measuring instruments, such as an individual diagnostic test and objective check list, is discussed in Chapter 13, and it is expected that many teachers may profitably use such a diagnostic test as is there described. But the proper use of the informal tests, supplemented by observation, will yield for the resourceful teacher information of a diagnostic character that is of practical usefulness in teaching to meet individual needs.

The kind of testing to determine individual differences to which we have referred in the preceding paragraph is not to be confused with the giving of a standardized test of reading achievement. The commonly used standard test is of value for certain purposes, such as to discover the range of reading ability in a class or school, to determine the range of achievement in certain phases of reading — for example, word recognition or comprehension — and to measure the amount of gain resulting from instruction.

However, such tests indicate little concerning detailed reading abilities and faults and they should not be relied on as a full guide for directing instruction, especially for individual pupils. Yet the expenditure of time and money to obtain standard achievement test results is usually quite worth while. A reliable reading-achievement test, given at the beginning and at the end of the year, will show the class gain in reading achievement and will give data that can be used in other ways. If a reading-capacity test is used, comparison with the child's reading achievement will indicate whether the child is reading up to expectation.

In choosing the reading-achievement test, one should be guided by whether the test is well constructed and standardized, whether it is fitted to the range of abilities in the group to be tested, and whether it is sensitive to small units of growth. The test should be interesting to children in its form and content. Its norms should be representative. It should require at least ten points of "raw score," or items passed successfully, for each year of educational age. It should not be too easy for the better pupils or too hard for the slower ones. For example, at the end of the year in grade three the lower half of the class may be tested more reliably by a primary test designed for grades one to three, while the upper half of the class may be better served by a test designed for grades three to six.

If it is desired to determine the child's reading capacity, one of the more reliable measures is the Durrell-Sullivan Reading Capacity Test.<sup>1</sup> This test is a measure of the child's ability to understand spoken language. Group tests of intelligence that contain many reading items should not be used to estimate the child's reading capacity, since children who have poor reading skills cannot do well on them.

<sup>1</sup> This test is available in a Primary Test (combining also an achievement test) for grades two and three, and an Intermediate Test for grades three to six. Published by World Book Company, Yonkers-on-Hudson, New York; 1937.

Both group tests and individual tests are used in informal analysis of reading needs. Of equal importance to the testing are check lists for noting the more important errors and difficulties. The tests described in this chapter are simple to make and use, and they may be substituted for the regular reading instruction at intervals when the class needs are being studied.

Tests which require oral reading or oral answers must be given individually, either in a separate room or in the back of the classroom so that children to be tested later do not become acquainted with the tests. Since the time required for the individual tests is short, they may be given during study periods or at intervals before and after school. If time is available for testing only a few individuals, they should be those pupils in the lower third of the class. Group testing may be done during the regular reading period.

Testing does not represent a loss in the time devoted to reading instruction, since it is really supplementary practice. Many of the tests suggested in this book are suitable for use as regular practice exercises. Children usually enjoy taking these tests, particularly if they are shown the results immediately and if they are told the amount of their real or possible improvement.

The teacher need not use all tests suggested for each of the various abilities. Supplementary tests are offered for teachers who wish to make a more detailed study of any particular ability. Children with severe difficulties usually require the detailed analysis suggested in Chapter 13. The testing program assumes that each child has had a physical examination and has no difficulties in vision or hearing. Improved tests of vision are recommended in Chapter 12.

### READING INTEREST AND ATTITUDE

It is important to know whether the child enjoys and practices independent reading. Until the child enjoys



reading, he will not make rapid progress. A simple scale for attitude and interest will be found satisfactory. Such a scale, with five levels or steps, is shown below.

1	2	3	4	5
Avoids all reading	Requires some urging; no voluntary reading	Reads willingly the assigned reading but little else	Is above average in voluntary reading	Delights in voluntary reading of all types

### ORAL-READING ABILITY

The oral-reading tests discussed below are suitable for pupils in primary grades and for slow learners in intermediate grades. They cover three aspects of oral reading: reading level, habits and confusions, and suitability of materials.

In a series of well-prepared, graded readers (e.g., a so-called "basal" series) select short stories of two or three pages from each book from primer through fourth reader. From the primer and the first reader choose two stories each, one in the first part of the book and one in the last part, since materials at the beginning and the end of such books differ in difficulty. From each of the advanced books choose one story. While the selections need not be more than one hundred words in length, it is often difficult to find such short material for third and fourth grades. The longer the selection, the greater will be the time required for testing, and it is important that individual testing be brief.

The vocabulary of each story should be typical of the book as a whole. Some readers, especially basal readers, have review stories at intervals; these are particularly well suited for testing oral-reading level. It is desirable, too, not to use selections already read. A child with a good memory for stories can often give the appearance of read-

## BASIC READING ABILITIES

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ing while merely telling the story from memory. For each selection prepare five or six questions on cards. Avoid questions answerable by "Yes" or "No."

### EXAMPLE OF SELECTIONS CHOSEN FROM BASAL READERS FOR INFORMAL TESTS (*Daniels*<sup>2</sup>)

HAHN, J. L., HARRIS, J. M., and WAHLERT, J. *Child Development Readers*. Houghton Mifflin Company, Boston; 1935.

<i>Reading for Fun</i>	Page 32 (Low Primer) Page 130 (High Primer)
<i>Finding Friends</i>	Page 29 (Low First) Page 128 (High First)
<i>Making Visits</i>	Page 6 (Low Second) Page 216 (High Second)
<i>Meeting Our Neighbors</i>	Page 35 (Low Third) Page 308 (High Third)

O'DONNELL, M., and CAREY, A. *The Alice and Jerry Books*. Row Peterson & Co., Evanston, Illinois; 1936.

<i>Day In and Day Out</i>	Pages 14 and 15 (Low Primer) Page 124 (High Primer)
<i>Round About</i>	Page 9 (Low First) Page 183 (High First)
<i>Friendly Village</i>	Page 9 (Low Second) Page 222 (High Second)
<i>If I Were Going</i>	Page 26 (Low Third) Page 302 (High Third)

PENNELL, M. E., and CUSACK, A. M. *The Children's Own Readers*. Ginn & Co., Boston; 1936.

<i>Friends (Primer)</i>	Page 10 (Low Primer) Page 113 (High Primer)
<i>Book One</i>	Page 36 (Low First) Page 145 (High First)
<i>Book Two</i>	Page 13 (Low Second) Page 252 (High Second)
<i>Book Three</i>	Page 36 (Low Third) Page 325 (High Third)

<sup>2</sup> Daniels, Katharine. *Evaluation of Informal Reading Tests*. Unpublished Ed.M. Thesis, Boston University; 1939.

Have the child read apart from the group in a book suited to his grade level. If the selection is difficult, try one from the next lower level; if this also is too difficult, try a still easier one. A selection is considered too difficult if the child has difficulty with more than one word in twenty, or if he reads in a slow, labored manner. When a fairly satisfactory level is found, have him read the story and ask him the questions written on the card. Help him with words on which he hesitates five seconds or more, and correct his errors at once so that he will obtain a clear understanding of the story.

As the child proceeds orally, several reading characteristics should be noticed. Use a check list of the important errors and record those on which the child needs help. Ignore occasional mistakes, as they may be only temporary. The following should ordinarily be noticed, either during the testing or during the regular classroom reading:

- |                                     |                                    |
|-------------------------------------|------------------------------------|
| 1. PHRASE READING                   | 4. EXPRESSION                      |
| Word-by-word reading                | Ignores punctuation                |
| Inadequate phrasing                 | Habitual repetition of words       |
| Incorrect phrasing                  | Habitual addition of words         |
| Eye-voice span too narrow           | Omission of words                  |
|                                     | Marked insecurity evident          |
| 2. VOICE                            | 5. WORD SKILLS IN ORAL READING     |
| Strained, high-pitched              | Makes errors on easy words         |
| Monotonous tone                     | Ignores meaningless pronunciations |
| Volume too great                    | Will not try hard words            |
| Volume too small                    |                                    |
| 3. ENUNCIATION                      |                                    |
| Poor enunciation in all reading     |                                    |
| Poor enunciation of difficult words |                                    |
| 6. COMPREHENSION                    |                                    |
| In easy material                    |                                    |
| In difficult reading                |                                    |

The eye-voice span is the distance the eyes are ahead of the voice in oral reading. The eyes must precede the voice in successful reading. Children who read word by word have almost no eye-voice span, while those who read by phrases have an eye-voice span of several words.

An interesting test of eye-voice span can be made, but it is not essential to reading diagnosis. Have a child read a relatively easy paragraph. After a line or two, slide a card over the page. The number of additional words which he can then state from memory constitutes his eye-voice span. The page should be covered at the beginning of a new line. The eye-voice span is thus not split by a return sweep to the next line. Let the child understand that he is to read as far as possible after the page is covered; otherwise he may stop immediately. Give him several trials.

Observation of eye movements is not basic to improvement of oral reading. If eye movements are to be observed in informal testing, the best method is to have the child hold the reading material sufficiently high for the examiner to follow the eye movements. Note is made of the number of movements, duration of pauses, and rhythmic sequence of pauses. Effective eye movements are characterized by a maximum of four eye stops for a line, short pauses between stops, rapid rhythmic movements from stop to stop, and quick return sweeps to the next line. Regressive, or backward, movements in the line indicate poor eye habits.

Observation of eye movements is merely to indicate to the teacher a possible need of exercises in phrase reading. Such need is shown by the ordinary observation of oral reading, so that a detailed recording of eye movements ordinarily should not be necessary.

A sheet for recording oral-reading abilities should contain the items commonly observed. The list may serve as a class record blank, with the child's name at the side and



the items at the top. The record sheet should indicate the level of oral reading, number of questions answered in recall, phrasing, enunciation, word habits, attention to punctuation, and perhaps eye-voice span.

### SILENT-READING SPEED AND COMPREHENSION

The best measure of silent reading in the primary and intermediate grades is the standard test. If such a test has been given, the grade score should be recorded on the child's record. If a standard test score is not available, however, several factors in silent reading may be measured informally.

Speed can be measured with a group test. The material should be a story of about 200 words, of the correct grade level and not previously read by the class. Tell the children to read rapidly but carefully enough to understand what they have read. Note the approximate time used by each child. For this purpose a "time sheet" may be prepared, with the numbers ten, twenty, thirty, etc., indicating seconds, down the side. On a watch with a second hand, the teacher follows the passage of time. As each child raises his hand, indicating his completion of the reading, his initials are recorded near the proper time figure on the record sheet.

A second often used method of recording time is to indicate on the board or on numbered cards the passage of every five seconds. When the child finishes his reading he records the time. From this record the words read per minute can be computed.

In another method of measuring silent-reading speed the children start a story and put a circle around the last word read when time is called. Two minutes are allowed in primary grades, and three or four minutes in grade four and above. The number of words read is computed by recording in the teacher's book the total words to the end

of each line. The following selection indicates the method:

Henry goes to a large lake in summer.	8
Last summer a motor boat sank near	15
his house. The boat had ten men on	23
it. The man who was running the boat	31
brought it very close to the shore	38
when the water was low. He hit a big	47
rock under water. It made a hole in	55
the bottom of the boat. The water	62
came in very fast. All of the men	70
swam to shore.	73

The rate for each pupil is computed by dividing the number of words read by the number of minutes allowed. To provide a safe guide, the average of several silent-reading speed tests should be used, rather than the results of a single test.

The speed-of-reading test should always be followed by comprehension questions on the material read. A list of questions about the reading material is put on the blackboard, or duplicated by mimeograph or hectograph. Avoid "Yes" and "No" questions. Phrase the questions differently from the textbook, so that comprehension rather than mere word memory will be tested. When the children have finished the reading for the speed test, have them answer the comprehension questions.

In primary grades children often have difficulty in spelling the words required to answer questions. The teacher may write a list of words on the board, some of which answer the questions and some of which do not. The child looks through the list to find the answers and copies them. The words may be numbered, the child using the number only as his answer.

Multiple-choice tests similar to those in standard tests

may be prepared for measuring comprehension also. It is important to test comprehension after each speed test. Otherwise children will read superficially and speed will grow at the expense of comprehension.

#### OTHER FACTORS OF SILENT-READING ABILITY

Factors other than speed and comprehension are involved in silent reading, but they are more difficult to observe than those causing difficulty in oral reading. However, some factors, such as head movements and lip movements, are fairly easy to observe.

Lip movements may be constant or only occasional. While children are reading silently, the teacher may suggest avoiding moving the lips. Soon certain children will resume lip movements. This fact should be recorded on the sheet for individual differences. Lip movements tend to slacken silent reading to the rate of oral reading. After the second grade, silent reading normally should be faster than oral reading.

Eye movements are studied individually, since the teacher must be close to the child who is being observed. The book being read should be held high enough so that the reader's eyes may be easily observed by the teacher, using the procedure suggested for the oral-reading test. Comparison of eye movements in silent and oral reading enables one to determine whether habits in the two types of reading are the same. Slow learners may be attentive and accurate in oral reading but inattentive and careless in silent reading.

Head movements, turning the head from side to side as the eyes move across the page, also reduce reading rate. This habit can be detected by asking youngsters to read without head movements, then noting those who resume such movements.

Other important factors in silent reading are attention,

general security, and persistence. A child may need urging to attend to his reading. On the other hand, he may consciously look away from the book at short intervals while studying.

The data yielded by careful observations such as those outlined above should raise numerous questions like the following: Does the learner have a slower silent rate than oral, or are they approximately the same? Has his high silent-reading rate developed at the expense of mastery of the material? Do reading rates and eye-movement traits indicate similar phrase-perception habits? Is comprehension in silent reading superior or inferior to that in oral reading?

#### WORD ABILITIES

Three types of word abilities are essential to reading success in primary and intermediate grades: word meaning, word recognition, and word analysis. Word meaning and word recognition refer to immediate use of words in specific selections. Word analysis constitutes a "transferred skill," not applicable to particular material, but used when need arises.

A child's understanding of the meaning of words may be misjudged because of his inability to read words; therefore word-meaning tests should be given orally. The hearing vocabulary test in the Durrell-Sullivan Reading Capacity Test measures meaning through picture responses, thus eliminating both the word-recognition and the reading-difficulty factors. In informal testing the examiner may discover whether particular words in a given selection are known to the children by asking them to tell what other words they think of, or what pictures come to their minds when they hear each word. Absence of responses means that the words must be enriched if they are to have meaning when they are read.

To read phrases without hesitation requires quick recognition of words. Consequently a child's ability to recognize words flashed in a quick-exposure device should be determined. The cardboard device known as the "tachistoscope," described in Chapter 8, may be used for quick exposure of words. For this purpose select ten words that have been taught recently. If the child cannot recognize the word in a quick flash, he will be unable to read it in a book without an extra eye movement.

If no tachistoscope is available, the words may be typed in a column with about four spaces between successive words. The teacher exposes a word quickly, by using a card to uncover and cover in a single motion. The motion cannot be made too rapidly, since the word should not be exposed for more than a tenth of a second.

Word analysis is often neglected in reading. A child must have ability to get new words independently, although his method may not necessarily involve sounding. The teacher's manual for most series of readers will indicate word-analysis skills which should have been mastered at different stages of learning. For testing skill in analysis, prepare a list of ten words new to the child, but related to his word-analysis background. If the child has adequate training in consonants, blends, and phonograms, the list might include such words as *hook, lake, wall, sound, hear, few, tight, grind, fold, and shop*, which can be mastered even without previous experience with them. In the upper grades use should be made of new words containing common prefixes, suffixes, and root words. The lists on pages 202 and 203 in Chapter 9 indicate the more common prefixes, suffixes, and roots.

Since there are many non-phonetic word elements, only phonetic words should be included in this test. Difficulties in accent and choice of phonic sounds are avoided by utilizing words already in the child's speaking vocabulary. On this test a failure is recorded for each incorrect pronuncia-



tion and for each response requiring more than ten seconds, since slow skills are inadequate.

If the child is to use the dictionary, his speed in finding words should be checked. Tests should measure ability to use the dictionary for determining pronunciations and for selecting meanings to suit contexts. Prepare a list of ten words to be looked up in the dictionary. For each word, the child writes the number of the dictionary page or the guide word. Record the time required to find the ten words. A sample list for this test taken from sixth-grade books follows: *placid, graven, robust, wince, hideous, negative, terminate, foliage, pursuit, technique*. In preparing a word list for the dictionary test, avoid words beginning with common prefixes, such as *in, re, con*. These are difficult to find in the long list of words containing such prefixes. They demand the advanced skill of using the third or fourth letter in the word. Such words may be used, however, for later tests.

The record sheet for word skills should include the number of correct responses on the various tests and observations in regard to the use of the various skills.

#### WORD SKILLS IN SILENT READING

An important reading skill is ability to get the meaning of a word from the context. This skill may be measured by selecting difficult words from the material being studied and with these devising a definition-matching test. The words are arranged in columns, in groups of seven or eight, with nine or ten definitions in another column. Definitions should fit the meaning in the specific context, and they also should contain words understood by the child. Short words and definitions should be put in parallel columns. A typical arrangement of an informal definition-matching test is given at the top of the following page.

## DISCOVERING DIFFERENCES

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- |              |                             |
|--------------|-----------------------------|
| a. remove    | 1. grow larger              |
| b. employ    | 2. opinion                  |
| c. estimate  | 3. take away                |
| d. weary     | 4. a high place             |
| e. assemble  | 5. come together            |
| f. elevation | 6. come back                |
| g. increase  | 7. to make use of           |
| h. transfer  | 8. tired                    |
|              | 9. to hurt                  |
|              | 10. to put in another place |

The words and definitions are written on the blackboard, with letters beside the words and numbers beside the definitions. The child copies the letters and places beside them the numbers of the corresponding definitions. His paper for the above test would take this form:

- a. — 3  
b. — 7  
c. — 2  
d. — 8

When the pupil has finished the test, his paper is corrected and the score recorded. Then he re-reads the chapter, determining the correct definitions by observing use of the word in the sentence. If he is able to use the context to define words, his test score should improve markedly.

### STUDY SKILLS

Three types of study skills should be tested; namely, thorough detailed reading, speeded reading, and associational reading. These are described at length in Chapter 10. A variety of tests may be designed for each skill. Suggestions for building informal tests are given below.

*Thorough detailed reading* may be measured by a standard test which includes such skills as selecting the best sum-

mary sentence, selecting the central thought, organization of ideas, understanding significant details, or reading to follow directions. These abilities require careful study and fairly thorough reading.

The simplest informal test for thorough reading is a test for selection of main ideas. The child reads a passage of about four paragraphs, from a biography, history, or encyclopedia. The teacher lists major and minor topics in each paragraph on the blackboard, but not necessarily in the correct order. The child is asked to mark the more important topics with two checks and the minor topics with one. The topics should be worded in short, terse phrases or sentences, such as those composing newspaper headlines and sub-headlines.

A most important *speeded-reading* skill is ability to locate desired information. At the lower levels, such tests should require location of proper names or dates, since the conspicuousness of the capitalizations or the figures make these easy to find. Prepare six questions requiring location of information in a chapter in a history, biography, or science book. Sample questions are: (1) What was the first year in which more than a million automobiles were sold? (2) Which individual company has produced the most automobiles? Record the total time needed to find the answers, or the number of answers located in a specified time. The child's success in locating the material may be ascertained by having him write his answer, indicating the first three words of the paragraph containing the answer, or by designating the page number and paragraph.

A more difficult test consists of asking the child to locate facts or ideas through questions containing phrases that will be found in the answer in the book; the phrases are the cues to the answers. Such questions as the following may be used: (1) What is the method of selecting furs? (The paragraph in the book containing the answer begins, "The method of selection of furs . . .") (2) When is

the best time of year for trapping these animals? (The paragraph containing the answer has a sentence which begins, "The best time of the year for trapping these animals . . .")

*Associational reading* is concerned with uses, applications, comparisons, criticisms, and other ideas brought to the reading by the child. Such reading is in contrast to the thorough type in which the child merely attempts to understand the given material rather than to add his own thoughts and interpretations.

Many types of associational skills may be measured informally. Ask the children to list all the topics for special study which they can think of while reading an informational selection. An example of this assignment might be, "While you read this story about the uses of insects, list all the topics you can think of which would be interesting for further study." Another might be, "As you read this story about fine craftsmanship in making pianos, think of as many other fields as you can where fine craftsmanship is appreciated, and write them down." Other associational assignments might call for suggestions for improving a selection, for noting points of comparison between two selections, etc. On any of these associational tests, a record should be kept of the number of acceptable associations.

### ORAL AND WRITTEN RECALL

Even though a child reads and understands a selection well enough to answer detailed questions, he often will be unable to tell the significant points without the aid of questions. Since many types of recitation and reports based on reading require unaided recall, either orally or in writing, it is important to study individual differences in these abilities. A child may differ in ability in oral and in written recall, so that both should be tested.

For testing oral recall have the child read silently a short

selection of approximately one hundred words. Ask him to tell all that he can remember of what he has read. On a previously prepared list of ideas or events in the selection, check each idea the child recalls. Note the completeness of recall, as well as the accuracy and organization. Also note whether his response comes easily or whether it is labored and uncertain.

Written recall may be measured in a similar fashion, except that a group test may be used. After the children have read the selection, they are asked to write as much of it as they can remember. Their recall is checked against a list of ideas in the selection. This may be done by underlining each of the ideas on each pupil's paper and counting the number of ideas. Completeness, accuracy, and organization are noted as before. Observe whether speed of handwriting or spelling difficulties appear to impede the recall. These two factors may be tested separately.

#### REFERENCES

Standardized reading tests are described and evaluated in the following books:

- BUROS, OSCAR K. *The 1938 Mental Measurements Yearbook*. Rutgers University Press, New Brunswick, New Jersey; 1938.
- GREENE, H. A., and JORGENSEN, A. N. *The Use and Interpretation of Elementary School Tests*. Longmans, Green & Co., New York; 1935.
- LINCOLN, E. A., and WORKMAN, L. L. *Testing and the Use of Test Results*. The Macmillan Company, New York; 1935.
- National Society for the Study of Education. *Thirty-Sixth Yearbook, Part I. The Teaching of Reading: A Second Report*, Chapter XII. Public School Publishing Company, Bloomington, Illinois; 1937.
- WEBB, L. W., and SHOTWELL, ANNA M. *Standard Tests in the Elementary School*, Chapter VIII. Farrar & Rinehart, Inc., New York; 1932.

For guidance in constructing new-type questions see:

- RINSLAND, HARRY D. *Constructing Tests and Grading in Elementary and High School Subjects*. Prentice-Hall, Inc., New York; 1937.
- RUCH, G. M. *The Objective or New-Type Examination*. Scott, Foresman & Co., Chicago; 1929.



The use of informal reading tests is discussed in the following:

National Society for the Study of Education. Twenty-Fourth Yearbook, Part I. *Report of the National Committee on Reading*, Chapter IX. Public School Publishing Company, Bloomington, Illinois; 1925.

National Society for the Study of Education. Thirty-Sixth Yearbook, Part I. *The Teaching of Reading: A Second Report*, Chapter XI. Public School Publishing Company, Bloomington, Illinois; 1937.

STORM, G. E., and SMITH, N. B. *Reading Activities in the Primary Grades*, Chapter XIII. Ginn & Co., Boston; 1930.

Catalogues of standard tests in reading and other school subjects may be obtained from the following publishers:

Educational Test Bureau, Minneapolis, Minnesota, and Philadelphia, Pennsylvania.

Houghton Mifflin Company, Boston, Massachusetts.

Public School Publishing Company, Bloomington, Illinois.

Teachers College Bureau of Publications, Columbia University, New York, N. Y.

World Book Company, Yonkers-on-Hudson, New York.

The standard reading tests commonly used in the Boston University Educational Clinic and in survey work are:

### PRIMARY GRADES:

*Durrell-Sullivan Reading Capacity and Achievement Tests*. World Book Company.

*Gates Primary Reading Tests*. Teachers College Bureau of Publications.

*Metropolitan Reading Tests*. World Book Company.

### INTERMEDIATE GRADES:

*Durrell-Sullivan Reading Capacity and Achievement Tests*. World Book Company.

*Iowa Silent Reading Tests: Elementary Test*. World Book Company.

*Metropolitan Reading Tests*. World Book Company.

### INTELLIGENCE AND CAPACITY TESTS:

*Durrell-Sullivan Reading Capacity Test*. World Book Company.

*Stanford Revision of the Binet-Simon Tests*. Houghton Mifflin Company.

TABLE 1

TYPICAL RECORD FORM FOR INFORMAL TESTS  
PRIMARY GRADES

SCHOOL	GRADE	TEACHER	DATE	NAME OF PUPIL				ORAL READING										SILENT READING				WORD ABILITIES			RECALL	
				Age	Reading Capacity or Mental Age	Reading Age (from standard tests)	Reading Interest Rating	Level (informal tests)	Comprehension	Phrase Reading	Voice	Enunciation	Expression	Ignores punctuation	Habitual repetition of words	Addition or omission of words	Errors on easy words	Ignores word errors	Speed	Comprehension	Lip movements	Independence	Word Meaning	Word Analysis	Quick Recognition	Written
				8-4	7-6	6	1	Low		✓							✓	✓	✓			✓		✓		
Albert				8-6	9-4	10-2	5	IV			✓															
Helen																										

Check those items on which the child needs help; enter other data in appropriate columns.

TABLE 2

### TYPICAL RECORD FORM FOR INFORMAL TESTS INTERMEDIATE GRADES

[illegible]

Check those items on which the child needs help; enter scores or other data in appropriate columns.

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## CHAPTER 3

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### INDIVIDUAL DIFFERENCES AND THEIR BEARING UPON INSTRUCTION

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**C**HILDREN in the same grade will differ greatly in their reading abilities even though they have received a similar amount and type of reading instruction. These differences in development are due to variations in intelligence, in sensory capacities and physical condition, in background of language development, and in confusions and faulty habits in the learning process.

One of the chief outcomes of the use of standard tests has been the discovery of the wide range of pupil ability — the extent of individual differences — in the same grade in any school subject. Any standard test survey of reading achievement will show the highest pupil in a given grade to be several years above the lowest pupil of that grade. The range of abilities increases in each higher grade. Furthermore, a whole grade in a school sometimes is exceptionally strong or weak, scoring much above or below the national average on a standard test.

#### THE WIDE RANGE OF READING ABILITY

Table 1 on pages 40, 41, and 42 displays some of the differences among grades in reading and also shows the typical range in reading ability which a teacher may expect in any grade. Each item in the tables for the various grades represents one classroom, varying in enrollment from 19 to 45 pupils.

Study the table for the second grade as an example. The average reading achievement in the poorest second

grade (first line of table) was at the level of the sixth month of the first grade (1.6), whereas the best grade (line 22 of table) had a median grade score corresponding to the fourth month of the third grade (3.4). There is a range of nearly two grades in the median or *average* pupils. It is evident that the materials as well as the methods for reading instruction should be markedly different for these two grades, even though they are both labeled "grade two." Note also these additional facts: In the poorest second grade the lowest pupil is unable to read at all (1.0 is beginning of first-grade score), while the highest pupil is not quite up to average for the grade (2.4). But in the best second grade the lowest pupil with a score of 2.0 is just a few months below average for the grade and the highest pupil with a score of 5.9 is doing very nearly sixth-grade work. The range of ability in the poorest second grade is 1.4 years; the range in the best second grade is 3.9 years.

It must not be inferred that the magnitude of the instructional problem is always in proportion to the range of reading ability. A difference of six months in reading ability at the first-grade level represents a much greater teacher problem than a difference of two years at a sixth-grade level. There will need to be more stages of adjustment of work in the poorest second grade than in the best second grade, even though the range of abilities is much narrower in the former.

Similar differences in ability are seen among the 26 third-grade classrooms included in the table. The poorest third grade *averages* more than one full year below standard, while the best third grade is more than a year above standard. The column of lowest pupils in each of these third grades shows that one may expect to find many pupils in third grade reading on a low first-grade level. The column of highest pupils shows that one may normally expect to find pupils in any third grade reading on a fifth-, sixth-, seventh-, or even eighth-grade level. The average grade



# BASIC READING ABILITIES

range is from low second-grade to middle fifth-grade ability. The teacher of the typical third grade must, therefore, provide for a wide range of individual abilities; the differences between pupils are marked.

TABLE 1

RANGE OF READING ABILITY IN VARIOUS CLASSROOMS

Measured by the Durrell-Sullivan Reading Achievement Test  
(February, 1937)

GRADE II CLASSROOM READING GRADE				GRADE III CLASSROOM READING GRADE			
Number of Classroom	Lowest Pupil	Average Pupil	Highest Pupil	Number of Classroom	Lowest Pupil	Average Pupil	Highest Pupil
1	1.0	1.6	2.4	1	1.4	2.3	3.6
2	1.0	1.8	2.9	2	1.4	2.5	4.9
3	1.0	1.9	3.9	3	1.8	3.0	4.7
4	1.0	2.0	3.6	4	2.2	3.0	4.9
5	1.0	2.0	2.7	5	2.2	3.1	5.1
6	1.2	2.0	2.9	6	1.9	3.2	5.2
7	1.2	2.0	3.6	7	2.1	3.2	4.4
8	1.2	2.1	3.8	8	1.8	3.3	8.7
9	1.2	2.4	5.8	9	1.4	3.3	5.3
10	1.8	2.4	4.0	10	1.8	3.4	5.4
11	1.0	2.5	5.0	11	2.1	3.4	5.5
12	1.6	2.5	4.5	12	2.1	3.4	5.0
13	1.6	2.6	3.2	13	1.9	3.5	6.0
14	1.4	2.6	3.8	14	1.8	3.5	8.7
15	1.6	2.6	3.2	15	1.6	3.5	5.3
16	1.4	2.6	4.5	16	2.1	3.6	5.5
17	1.6	2.6	3.2	17	2.1	3.7	5.4
18	1.4	2.7	3.8	18	2.6	3.8	6.2
19	1.4	2.7	3.8	19	2.1	3.9	5.7
20	1.0	2.8	5.3	20	2.0	3.9	5.3
21	1.4	2.9	4.7	21	2.5	3.9	5.4
22	2.0	3.4	5.9	22	2.3	4.0	7.0
				23	2.7	4.2	6.3
				24	2.9	4.4	6.2
				25	2.7	4.4	6.5
				26	3.5	4.8	8.7
Median	1.4	2.5	3.8	Median	2.1	3.5	5.4

TABLE 1 (Cont'd). RANGE OF READING ABILITY IN VARIOUS CLASSROOMS

GRADE IV CLASSROOM READING GRADE				GRADE V CLASSROOM READING GRADE			
Number of Classroom	Lowest Pupil	Average Pupil	Highest Pupil	Number of Classroom	Lowest Pupil	Average Pupil	Highest Pupil
1	2.1	3.3	4.7	1	2.0	4.5	6.5
2	2.2	3.6	5.1	2	2.4	4.6	7.0
3	1.9	3.6	5.3	3	2.6	4.6	7.9
4	2.3	3.7	4.8	4	2.8	4.9	8.5
5	1.2	3.8	6.7	5	2.2	5.0	10.0
6	2.3	3.8	4.7	6	3.6	5.0	8.0
7	1.0	3.9	7.0	7	3.6	5.0	7.0
8	1.4	3.9	6.4	8	3.0	5.1	7.9
9	2.5	3.9	5.2	9	2.2	5.1	8.0
10	2.1	3.9	5.9	10	2.3	5.2	8.5
11	1.8	3.9	6.3	11	3.3	5.3	8.5
12	3.0	4.0	6.9	12	2.7	5.3	10.0
13	2.5	4.0	7.5	13	3.4	5.4	8.0
14	1.9	4.0	7.5	14	3.5	5.4	8.5
15	2.8	4.1	7.3	15	3.1	5.4	8.7
16	3.2	4.2	6.8	16	3.1	5.4	7.9
17	1.6	4.3	7.0	17	1.9	5.4	8.5
18	2.9	4.3	8.0	18	3.6	5.5	9.0
19	3.1	4.4	6.4	19	2.8	5.5	8.3
20	1.9	4.5	6.3	20	4.4	5.5	8.0
21	2.8	4.5	5.8	21	3.6	5.5	10 +
22	3.7	4.5	6.4	22	2.4	5.7	9.1
23	2.7	4.7	7.9	23	2.9	5.7	10.0
24	2.3	4.7	6.4	24	3.8	5.8	9.0
25	2.8	4.7	7.9	25	3.1	5.8	8.9
26	2.4	4.8	6.7	26	3.2	5.9	8.7
27	3.6	4.8	7.5	27	3.6	6.0	10 +
28	3.2	4.8	6.0	28	3.6	6.2	10 +
29	3.0	4.8	9.5	29	3.3	6.3	9.5
30	2.5	4.8	7.9	30	4.1	6.3	9.0
31	2.3	4.9	8.9	31	3.4	6.3	8.5
32	3.4	4.9	6.4	32	4.2	6.4	10.0
33	2.3	4.9	6.5	33	4.9	6.4	10 +
34	3.8	4.9	9.0	34	3.9	6.5	10.0
35	3.2	5.0	9.0	35	4.4	6.9	10.0
36	2.5	5.2	8.3	36	3.9	6.9	10.0
37	3.6	5.5	8.5	37	4.2	6.9	9.0
38	2.7	5.5	8.7	38	4.2	6.9	10.0
				39	5.0	7.3	10.0
				40	5.0	7.5	10.0
Median	2.5	4.5	6.7	Median	3.4	5.5	9.0

# BASIC READING ABILITIES

TABLE 1 (*Cont'd*). RANGE OF READING ABILITY IN VARIOUS CLASSROOMS

GRADE VI							
CLASSROOM READING GRADE							
Number of Classroom	Lowest Pupil	Average Pupil	Highest Pupil	Number of Classroom	Lowest Pupil	Average Pupil	Highest Pupil
1	2.5	4.9	8.3	21	4.5	6.9	10 +
2	3.6	5.1	6.7	22	3.6	6.9	8.7
3	1.4	5.3	7.9	23	5.3	7.0	10 +
4	3.4	5.4	10 +	24	4.9	7.0	10 +
5	3.0	5.5	8.5	25	4.5	7.0	10 +
6	2.3	5.5	7.3	26	4.2	7.0	10 +
7	3.8	5.8	9.0	27	5.4	7.0	8.9
8	4.0	5.8	8.3	28	4.6	7.0	10 +
9	3.5	5.8	9.0	29	5.1	7.0	10 +
10	4.5	5.8	7.9	30	4.0	7.3	10 +
11	4.3	6.0	8.5	31	4.8	7.5	10 +
12	3.2	6.0	9.0	32	5.1	7.7	10 +
13	4.6	6.0	8.5	33	5.1	7.9	10 +
14	3.9	6.2	10 +	34	5.2	7.9	10 +
15	4.8	6.2	8.5	35	4.9	7.9	10.0
16	4.5	6.2	8.0	36	5.3	8.0	10 +
17	2.7	6.4	9.0	37	5.8	8.3	10 +
18	3.2	6.4	10 +	38	6.7	8.5	10 +
19	4.3	6.4	10 +				
20	4.9	6.7	10 +	Median	4.5	6.5	10 +

Examination of the tables for grades four, five, and six shows that they too present wide ranges of reading ability. In each of these grades the average pupil of the poorest classroom is a full grade below standard; and the best classroom is, for fourth grade, a full grade above standard and for grades five and six is two full grades above standard. In each of these intermediate grades one finds several pupils reading on a second-grade level and a great many on a low third-grade level. Also, in each of them the best pupil is reading four or five years in advance of his grade.

Table 1 is presented here to call attention to the fact that without exception every study of pupils' reading ability shows a wide range of reading achievement. The fact that

a child is sitting in a room labeled grade two, grade four, or grade six is no indication that he needs reading material of the level commonly assigned to that particular grade.

#### DIFFERENCES IN READING CAPACITY AND READING ACHIEVEMENT

It is common to assume that when a child's achievement in a subject is low, the reason for failure is to be found in the child's lack of mental capacity or general intelligence. High achievement is attributed either to excellent teaching or to high intelligence, depending upon the modesty of the teacher or the supervisor. Let us consider what the real situation is in reading. What is the relation between children's capacity, or potential ability, to read and their accomplishment in the actual reading process? Data bearing upon this will be given in several forms.

In Table 2 (page 44), the criterion for reading capacity is taken to be the child's ability to understand spoken language, or his hearing comprehension as measured by the Durrell-Sullivan Reading Capacity Test. The assumption is that if a child can understand spoken language up to, say, a fifth-grade level, then he should be able to read to that level, provided his eyes are good and the teaching methods have been adequate. In Table 2 it will be seen that in general those children who score high in hearing comprehension — that is, have good understanding of spoken language — are usually reading at grade or above, while those who score low in hearing comprehension are below grade in reading ability.

Table 2 shows that many children do not have reading achievement equal to their capacity, as judged by their understanding of spoken language. Several are well below the achievement that would be expected from their capacity or hearing-comprehension scores, and the grade as a whole is not reading as well as the hearing-comprehension test in-

## BASIC READING ABILITIES

dicates is possible. The records show that more time and attention should be paid to reading instruction.

As examples of individual cases, first notice children numbered 3, 4, and 5. William, Richard, and Ernest are

### TABLE 2

SCORES OF A TYPICAL GROUP OF THIRD-GRADE CHILDREN ON THE  
DURRELL-SULLIVAN READING CAPACITY AND ACHIEVEMENT TESTS

PUPIL	CAPACITY: HEARING COMPREHENSION GRADE	ACHIEVEMENT: READING GRADE	GRADE LEVEL: DIFFERENCE BETWEEN HEARING COMPREHENSION AND READING
1. Alice . . . . .	5.6	5.2	— .4
2. Mary . . . . .	4.9	4.1	— .8
3. William . . . . .	4.7	3.5	— 1.2
4. Richard . . . . .	4.7	3.2	— 1.5
5. Ernest . . . . .	4.4	3.2	— 1.2
6. Helen . . . . .	4.3	5.0	+ .7
7. Mary B. . . . .	4.3	4.1	— .2
8. Richard . . . . .	4.1	4.1	.0
9. Madeline . . . . .	4.0	3.5	— .5
10. Charles . . . . .	3.9	3.0	— .9
11. Jeanette . . . . .	3.9	3.7	— .2
12. Zella . . . . .	3.7	3.7	.0
13. Robert . . . . .	3.7	1.6	— 2.1
14. Lillian . . . . .	3.7	3.0	— .7
15. Teddy . . . . .	3.6	3.9	+ .3
16. Jean . . . . .	3.6	4.6	+ 1.0
17. Madeline B. . . . .	3.6	2.0	— 1.6
18. Joe . . . . .	3.5	3.3	— .2
19. Arthur . . . . .	3.5	4.6	+ 1.1
20. Tyler . . . . .	3.4	3.4	.0
21. Marjorie . . . . .	3.3	3.0	— .3
22. Mary C. . . . .	3.2	4.5	+ 1.3
23. Russell . . . . .	3.0	3.4	+ .4
24. Charles . . . . .	3.1	3.2	+ .2
25. Gladys . . . . .	2.6	2.0	— .6
26. Frances . . . . .	2.6	3.5	+ .9
27. Edna . . . . .	2.6	2.4	— .2
28. Eugene . . . . .	2.6	2.6	.0
29. Shirley . . . . .	2.6	3.1	+ .5
30. Carl . . . . .	2.4	1.4	— 1.0



in achievement about average for the grade. But they are not doing as well as they should; their hearing-comprehension grade ratings indicate that they have capacity to read one year in advance of the average achievement for the grade. Notice also children numbered 13, 17, and 30; Robert, Madeline B., and Carl could be described as having special disability in reading. Each one is reading more than one year below grade and more than a year below his indicated capacity as well. While these standard test results do not reveal the specific nature of instructional needs, it is a fair guess that William, Richard, and Ernest (Nos. 3, 4, and 5) would improve their reading rapidly by a program of extensive, well-motivated reading. The other three pupils (Nos. 13, 17, and 30) will need carefully graded practice in the mechanics of reading.

Several pupils represented in Table 2 are reading better than their hearing-comprehension scores would indicate. Jean, Arthur, and Mary C., pupils numbered 16, 19, and 22, have reading-achievement scores a full year above their capacity scores on the hearing-comprehension test. This is probably due to the fact that they spend more than an average amount of time in reading or have had more effective reading instruction than average; or, on the other hand, their opportunity for hearing spoken language may be limited so that they do poorly on a test of understanding spoken language. Further study of these cases is indicated.

The testing of more than 6000 children with the Durrell-Sullivan Reading Capacity and Achievement Tests shows that one may expect about 15 per cent of the pupils to be reading a year or more in advance of their hearing-comprehension scores, and an equal number to be reading a year or more below their hearing-comprehension scores. This does not mean that a child who is reading a year below his hearing comprehension should be regarded as normal and given no further consideration. Experience with these children shows that through an intensive instructional pro-

gram they may be rapidly brought up to a reading level at least as high as their hearing-comprehension level.

Table 3 (page 47) shows a comparison between Stanford-Binet mental ages and Stanford Achievement reading ages of a typical fifth-grade group.<sup>1</sup> Several children are reading a year or more below their mental age. If an age of eleven years is considered normal for fifth grade at the time of year this test was given, it will be seen that although pupils numbered 2, 6, 8, 9, and 12 are reading a year below mental age, they are nearly normal for grade in reading achievement and will not be considered to have a severe reading difficulty. Pupils numbered 23, 26, and 30 are reading at least a year below mental age and two years below grade. While all these children would profit by remedial-reading instruction, the latter three pupils would normally be the only ones chosen for such work. Four children are reading at least a year above the standard indicated by their mental ages. These are Richard, Dolores, Davis, and Lucy, children numbered 15, 18, 20, and 21.

In a study of 1130 pupils it was found that 28 per cent of them were reading a year or more in advance of their mental ages, while 15 per cent were reading a year or more below their respective mental ages. It is apparent that neither the Stanford-Binet mental age nor the hearing-comprehension score necessarily sets a limit to the child's reading achievement.

#### DIFFERENCES IN WORD RECOGNITION IN FIRST GRADE

The individual differences thus far discussed have been in connection with pupils in grade two and above. It is

<sup>1</sup> It should be noted that mental age is always used instead of the IQ as a basis for comparison with achievement-test scores. One cannot tell from an IQ alone the age or grade level at which a child should be reading.

# INDIVIDUAL DIFFERENCES

## TABLE 3

READING CAPACITY COMPARED TO READING ACHIEVEMENT IN A TYPICAL  
FIFTH GRADE AS SHOWN BY STANFORD-BINET MENTAL AGES AND STANFORD  
ACHIEVEMENT READING AGES

PUPIL	BINET MENTAL AGE	STANFORD READING AGE	DIFFERENCE BETWEEN BINET MENTAL AGE AND READING AGE IN YEARS AND MONTHS
1. Alfred . . . . .	15-0	14-8	- 0-4
2. George . . . . .	13-6	11-1	- 2-5
3. Elsie . . . . .	13-1	13-4	+ 0-3
4. Beatrice . . . . .	12-7	12-10	+ 0-3
5. Kenneth . . . . .	12-6	12-1	- 0-5
6. Gertrude . . . . .	12-4	11-3	- 1-1
7. Lorraine . . . . .	12-4	12-1	- 0-3
8. Edwin . . . . .	11-10	10-4	- 1-6
9. Emelia . . . . .	11-7	10-5	- 1-2
10. Dorothea . . . . .	11-7	11-10	+ 0-3
11. Aldina . . . . .	11-7	11-5	- 0-2
12. Antonio . . . . .	11-5	10-5	- 1-0
13. George B. . . . .	11-5	12-3	+ 0-10
14. Joseph . . . . .	11-3	11-0	- 0-3
15. Richard . . . . .	11-3	12-3	+ 1-0
16. Carlotta . . . . .	11-3	10-11	- 0-4
17. Elizabeth . . . . .	11-3	11-0	- 0-3
18. Dolores . . . . .	11-1	12-1	+ 1-0
19. Flavio . . . . .	11-0	10-11	- 0-1
20. Davis . . . . .	10-11	12-1	+ 1-2
21. Lucy . . . . .	10-11	12-7	+ 1-8
22. John . . . . .	10-9	11-7	+ 0-10
23. Charles . . . . .	10-9	9-4	- 1-5
24. Albert . . . . .	10-9	11-0	+ 0-3
25. Theresa . . . . .	10-4	10-0	- 0-4
26. David . . . . .	10-3	8-3	- 2-0
27. John B. . . . .	9-7	9-8	+ 0-1
28. Irene . . . . .	9-9	10-1	+ 0-4
29. Dorothy . . . . .	9-7	9-4	- 0-3
30. Henry . . . . .	9-4	8-3	- 1-1

well to examine how early differences in reading ability begin to appear. On the first day of school children begin to show differences in their ability to learn to read. Some children will come to school having learned to recognize a number of words. Occasionally a child may be able to read first-grade or even second-grade books with fluency, understanding, and enjoyment. Other children will display a low degree of interest in learning to read and will be unable to retain the new words taught.

Reading ability in the early first grade is probably best measured by the number of words the child can recognize. Table 4 shows the number of words a class of 36 children in one first grade were able to recognize after 60 words had been taught in the basal reading lessons. The range of ability is great. It will be noticed that some children made practically no progress and others learned only one half the words taught. Such pupils will be confused by the presentation of other new words when the old ones have not been mastered.

TABLE 4  
SCORES ON WORD-RECOGNITION TEST AFTER TEACHING  
SIXTY WORDS IN GRADE ONE

NUMBER OF WORDS CORRECT	NUMBER OF CHILDREN MAKING THIS SCORE
56-60	2
51-55	3
46-50	1
41-45	3
36-40	1
31-35	8
26-30	5
21-25	2
16-20	4
11-15	2
6-10	2
0-5	3
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## DIFFERENCES IN READING INTEREST

One of the first observations for the teacher to make is of the interest and attitude of her pupils in reading. After watching the pupils in the reading class and noticing the amount of voluntary reading being done, it is well to rate each child on the scale of attitude and interest in reading. While such ratings are quite subjective and depend upon the amount of interest which the individual teacher expects her pupils to show, it is important that some rating be made in order that attention may be focused on the wide range of interest and on those pupils who especially need a program of motivation in reading. Table 5 shows a summary of such ratings for two grades; eleven pupils in grade one are rated below average, while nine pupils are listed by the fifth-grade teacher as showing a lack of interest.

TABLE 5  
RATINGS OF ATTITUDE AND INTEREST IN READING

	NO. OF PUPILS	1 DISLIKE READING	2 BELOW AVERAGE	3 AVERAGE	4 ABOVE AVERAGE	5 DELIGHT IN READING
Grade I . . .	30	3	8	12	4	3
Grade V-B . .	24	2	7	9	3	3

## DIFFERENCES IN ORAL-READING ABILITIES

The child's ability in oral reading is particularly important in the primary grades as a basis for grouping for reading instruction. Tests of oral reading are also very useful for those pupils in grades four, five, and six who are reading on a third-grade level or below.



TABLE 6

DIFFERENCES IN ORAL READING AS SHOWN BY INFORMAL TESTS IN  
GRADE II AND GRADE IV-B

GRADE II	NO. OF PUPILS	PRE-PRIMER	PRIMER	LOW I	HIGH I	LOW II	HIGH II	LOW III	ABOVE III
	36	2	4	5	4	8	6	4	3

GRADE IV-B	NO. OF PUPILS	LOW II	HIGH II	LOW III	HIGH III	LOW IV	HIGH IV	ABOVE IV
	37	2	6	6	8	5	6	4

Table 6 shows the levels of oral reading found in a second grade and in a fourth grade. The ratings were obtained by testing each child in books of different difficulty levels in a basal reading series. Of the 36 pupils in the second grade, six are reading on a primer or a pre-primer level. Ordinarily these pupils would be grouped for instructional purposes so that extra practice in the word skills could be given to the especially slow pupils. Also there are five pupils reading on a low-first-grade level, and they too might form an instructional group. The four pupils reading on a high-first-grade level would make another group; the eight pupils at the low-second-grade level would make another; and the six pupils at the high-second-grade level would make still another. The seven pupils reading on the third-grade level or higher might form a group for a special project or for the encouragement of intensive individual reading on special topics which might be of interest to the class. Similar groupings for instruction could be made for the fourth-grade pupils so that their needs and difficulties in the mechanics of oral reading would be met.

## INDIVIDUAL DIFFERENCES

The two fourth-grade pupils who are at a low-second-grade level in oral reading present a special problem to the teacher. An effective adjustment of instruction to their ability would require extra preparation on the part of the teacher. For a class of 37 pupils it is doubtful whether a daily extra preparation is justifiable for only two pupils who are below grade standard. A usual way out of this difficulty is to have the children join a suitable oral-reading group in another classroom or to group a few children from several grades who are at approximately the same level of ability. The teachers from whose rooms these pupils come take turns each month in planning the lessons to suit the children's needs. Considerable teacher effort

TABLE 7

DIFFERENCES BETWEEN STANDARD SILENT-READING-TEST SCORES AND  
ORAL-READING LEVEL

GRADE II-B	STANDARD TEST SILENT- READING GRADE	ORAL- READING LEVEL	GRADE III	STANDARD TEST SILENT- READING GRADE	GRAY'S ORAL-READING GRADE
James . .	3.4	High 2	Curtis .	2.3	1.2
Greta . .	3.2	Low 2	Robert .	3.3	1.9
Malcolm .	2.5	High 1	Elaine .	3.3	2.4
Robert . .	2.4	Low 1	Annette .	3.3	3.0
Dorothy .	2.4	Low 1	Raymond	3.0	2.3
Joan . .	2.1	High Primer	Doris . .	3.2	1.8
Anne . .	2.0	High Primer	Eleanor .	3.3	1.9
Martha . .	2.3	High Primer	Richard .	3.1	2.1
Alfred . .	2.0	Pre-Primer	Barbara .	3.2	2.1
Arline . .	2.0	Low Primer	John . .	2.6	1.4
Ruth . .	1.9	Low Primer	Charles .	2.8	2.1
John . .	1.9	Av. Primer	George .	2.9	1.8
Clifford .	1.8	Av. Primer	Peggy .	2.8	2.4
Maurice .	1.8	Low Primer	Lewis .	2.9	2.5
Richard .	1.8	Low Primer	Glenna .	3.1	2.3
Raymond	1.8	Pre-Primer	Dorothea	3.1	2.9
Kathleen	1.7	Pre-Primer	Louise .	2.6	2.5
			Alfred .	3.3	2.8

may be saved by forming groups of children from different classrooms who have similar needs.

One must not take the scores on a standard silent-reading test as a basis for grouping children for oral-reading instruction in the primary grades. Table 7 indicates this for two grades. For grade two it shows the reading-grade scores on a reliable standard test of silent reading compared with the teacher's estimate of the proper level of material for oral reading as determined by actual tryout in basal readers as suggested above. For grade three the table compares the standard silent-reading test results with the results obtained on Gray's Standardized Oral Reading Paragraphs. While in many cases the grade levels for both oral and silent reading are almost the same, in others the difference amounts to more than one full grade. It is always well to check the silent-reading-test results by actual trial in books. If the silent-reading test shows that the child's level is 3.6, and an actual trial in the third-grade book results in the child's making one error in every five words, there can be little doubt that that book is much too difficult for effective learning. The informal oral-reading test is usually the most practical basis for determining the difficulty level of reading books suitable for instruction in the primary grades.

#### SPECIFIC DIFFICULTIES AND FAULTY HABITS

A most important outcome of informal but careful observations of pupils at their reading is a knowledge of the specific faulty habits which are to be corrected through suitable lesson plans. As an indication of the nature and frequency of different types of faulty habits to be expected in oral reading, Table 8 below shows the percentage of pupils in grades three and four to make some of the more common errors in oral reading. It is this sort of information which guides the instructional program in the mechanics of reading. Such a chart of the various kinds of faulty

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habits and difficulties immediately directs the attention of the teacher to possible means of overcoming them. This sort of information, obtained through a check list of difficulties observed during oral reading, is not obtained from any standard test in use at present.

TABLE 8  
PER CENT OF ERRORS IN ORAL READING  
(Studies by Duffy<sup>2</sup> and Burns<sup>3</sup>)

	87 THIRD-GRADE PUPILS	143 FOURTH-GRADE PUPILS
<i>Phrase Reading</i>		
Word-by-word reading . . . . .	25	8
Inadequate phrasing . . . . .	27	33
Incorrect phrasing . . . . .	34	7
<i>Voice, Enunciation, Expression</i>		
Strained, high-pitched voice . . . . .	24	18
Monotonous tone . . . . .	30	27
Volume too loud or too soft . . . . .	24	10
Poor enunciation in all reading . . . . .	2	16
Poor enunciation of difficult words . . . . .	38	16
Ignores punctuation . . . . .	49	7
Habitual repetition of words . . . . .	25	44
Insertion and omission of words . . . . .	44	22
Marked insecurity evident . . . . .	20	15
<i>Word Skills in Oral Reading</i>		
Inadequate word-mastery skill . . . . .	32	14
Errors on easier words . . . . .	38	46
Guesses at unknown words . . . . .	41	5
Ignores word errors . . . . .	47	30
Poor enunciation of prompted words . . . . .	16	13

<sup>2</sup>Duffy, Gertrude B. *A Diagnostic Study of Reading Difficulties in Third Grade*. Ed.M. Thesis, Boston University; 1934. Published in part in *Education*, Vol. 56 (September, 1935), pages 37-40.

<sup>3</sup>Burns, Barbara. *Diagnostic Studies of Reading Difficulties in Fourth Grade*. Unpublished Ed.M. Thesis, Boston University; 1938.

This table of difficulties in oral reading reveals many instructional needs. The fact that 25 per cent of the pupils in third grade read word-by-word shows an urgent need for assistance in phrase reading. Almost an equal proportion are reading in a strained, high-pitched voice, probably indicating tension or confusion that needs to be eliminated. It is evident, too, that attention needs to be paid to a proper regard for periods and commas, as well as other phases of expression in oral reading. Many other instructional needs will be discovered by examining the table.

The making of such charts or tables of faulty habits is one of the best ways of discovering difficulties common to the children in a single grade or school, or of evaluating the weaknesses of the instructional program in reading. If teachers in the various grades prepare a common check list to be used in all the elementary grades, and agree upon a general basis for determining whether a child has faulty habits, the application of such a check list will uncover pupils' difficulties and faulty habits which continue throughout the entire range of grades. If there are many difficulties encountered with great frequency, it might be well to designate a particular grade level at which each faulty habit is to be eliminated. Such a division of labor will simplify the teaching and give the child greater security by focusing his attention on only a few items at a time.

### DIFFERENCES IN SILENT-READING RATE AND HABITS

Speed and errors in silent reading are also discovered by informal tests and are especially helpful to teachers in the intermediate grades. Table 9 shows the average silent-reading rates of 24 pupils in grade 4 B, when tested on typical fourth-grade material. It will be noted that the speed of the highest pupil is almost three times as great as the speed of the lowest pupil.

Wide differences in the speed of reading will be found



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TABLE 9

SILENT-READING RATES OF 24 PUPILS IN GRADE IV-B

	WORDS PER MINUTE								
	80-99	100-119	120-139	140-159	160-179	180-199	200-219	220-239	240-259
Number of Pupils	1	1	3	2	3	6	4	2	2

in almost every reading group. Slow reading is often caused by poor word perception as well as difficulties in comprehending the meanings of words and concepts. Occasionally the habit is persistent even in easy material when no such difficulties appear. In such cases the use of speed exercises, described in Chapter 7, may help.

Table 10, in which are shown faulty habits in silent reading for 143 pupils in the fourth grade, indicates what may be expected from observing silent reading. The presence

TABLE 10

PER CENT OF 143 PUPILS IN GRADE IV SHOWING CERTAIN FAULTY HABITS IN SILENT READING (Burns's Study)<sup>4</sup>

FAULTY HABIT	PER CENT SHOWING DIFFICULTY
Very low rate of silent reading . . . . .	8
High rate at expense of mastery . . . . .	6
Lip movements — Constant . . . . .	22
Lip movements — Occasional . . . . .	46
Whispering — Constant . . . . .	10
Whispering — Occasional . . . . .	23
Lacks persistence in hard material . . . . .	2
Marked insecurity . . . . .	11
Poor attention necessitating re-reading . . . . .	12

<sup>4</sup> *Op. cit.*

of lip movements and whispering at or above the third grade probably indicates a source of slow reading. Since oral-reading rate is normally surpassed by silent-reading rate at the third-grade level, lip movements or whispering tend to impede normal growth in speed of silent reading. The items "high rate at the expense of mastery," "marked insecurity," and "poor attention necessitating re-reading" are rather difficult to observe, except by noticing the child at work in silent reading and by studying the difficulties in oral recall immediately after reading.

#### DIFFERENCES IN ORAL AND WRITTEN RECALL

In both oral and written recall from silent reading, pupils exhibit marked differences in ability and in specific difficulties, which are particularly significant for instruction. Oral recall is more important at the primary-grade level and written recall at the intermediate-grade level. In Table 11 are presented the results of both oral and written recall of two passages of equal difficulty, each containing twenty significant items, which were read by fourth-grade pupils. In the oral recall each child was tested separately. After he had read the paragraph silently his oral report was checked on a record blank which contained each of the test items in order. For written recall whole classes of pupils were tested at once by having them read a selection, turn it over, and write all things remembered. The ideas in each pupil's written recall were checked against a list of twenty topics prepared by the teacher. Table 11 shows the wide range in pupils' ability to recall, either orally or in writing, the ideas that they have read. Furthermore, the records of individual pupils show that some pupils are able to recall orally with a great deal of fluency, but have little to report when asked to write what they remember; while for others the reverse is true. It is important to check re-

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## TABLE 11

### ORAL AND WRITTEN RECALL FROM SILENT READING

DISTRIBUTION OF NUMBER OF MEMORIES IN RECALL FROM 143

FOURTH-GRADE PUPILS (Adams's Study)<sup>5</sup>

MEMORIES	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Oral recall . . .	2	1	0	1	0	7	7	5	13	6	7	12	18	8	10	12	16	5	8	5	0
Written recall . .	0	0	1	1	2	4	7	7	12	7	12	11	12	11	18	9	10	8	8	2	1

call from reading, since the use of material read often depends more upon powers of expression than upon powers of comprehension.

Table 12 shows the difficulties common in oral and written recall among fourth-grade pupils studied. Poorly organized oral recall is characteristic of this group and apparently they had difficulty also in answering questions about items omitted in the oral report. 22 per cent were found to have a slow and labored response, while 19 per

## TABLE 12

PER CENT OF DIFFICULTIES IN ORAL AND WRITTEN RECALL AMONG 143 FOURTH-GRADE PUPILS (Burns's Study)<sup>6</sup>

DIFFICULTY	ORAL RECALL	WRITTEN RECALL
Unaided recall scanty . . . . .	15	31
Poorly organized recall . . . . .	55	14
Inaccurate memories and guesses .	19	16
Recall labored or slow . . . . .	22	—
Laborious writing . . . . .	—	21
Recall detail poorly on questions .	28	—
Spelling difficulty impedes recall .	—	37

<sup>5</sup> Adams, Phyllis. *Individual Differences in Fourth-Grade Reading*. Unpublished Ed.M. Thesis, Boston University; 1938.

<sup>6</sup> *Op. cit.*

cent made incorrect statements. The main difficulty in written recall apparently was lack of fluency, since 31 per cent were listed as having very scanty recall. 21 per cent were reported to have laborious writing, while 37 per cent appeared to be handicapped in their written recall by difficulty in spelling.

## DIFFERENCES IN HABITS ALLIED TO READING

Table 13 shows the frequency of faulty habits common to both oral and silent reading among children in grades three and four. The large percentage of head movements in both grades indicates the need for attention to that habit. Head movements in themselves are probably not particularly serious, but they do serve as a means of pacing the silent-reading rate and occasionally they account for the child's failure to make adequate gain in speed of reading. Although only a small per cent of the pupils hold their books incorrectly, so as to impede clear vision, the defect is a rather important one and should be given immediate

TABLE 13  
DIFFICULTIES COMMON TO ORAL AND SILENT READING  
(From Studies of Burns<sup>7</sup> and Duffy<sup>8</sup>)

DIFFICULTY	PER CENT OF PUPILS SHOWING DIFFICULTY	
	87 Third-Grade Pupils	143 Fourth-Grade Pupils
Head movements . . . . .	34	62
Loses place easily . . . . .	2	5
Holds book incorrectly . . . . .	9	10
Shows signs of tenseness . . . . .	10	43
Poor posture . . . . .	9	1
Effort and attention low . . . . .	2	1
Shows aversion to reading . . . . .	0	1

<sup>8</sup> *Op. cit.*

<sup>7</sup> *Op. cit.*

attention. For the item "Shows signs of tenseness," differences in the standards of marking may account for the greater percentage in grade four than in grade three. However, some feature of the fourth-grade instructional program or a temporary fear of the tests at the time the observations were made may account for the difference.

#### DIFFERENCES IN WORD ABILITIES IN SILENT READING

The frequency of difficulties in certain silent-reading word skills is shown in Table 14. The same selections were used in all the grades indicated in the table, which accounts for the smaller number of words unknown to the pupils of each successive grade. When the pupils were asked to look through the selection to find any words they did not know, the fourth-grade pupils found only 29 per cent of the words which a later test showed they did not know, or less than one word in three; the pupils in grades

TABLE 14  
WORD SKILLS IN SILENT READING  
(Elivian's Data)<sup>9</sup>

	25 PUPILS IN GRADE 4	23 PUPILS IN GRADE 5	25 PUPILS IN GRADE 6	23 PUPILS IN GRADE 7	31 PUPILS IN GRADE 8
Number of unknown words in selection . . . . .	50	44	35	28	22
Unknown words found by pupils . . . . .	15	19	14	14	11
Per cent of unknown words discovered . . . . .	29	41	40	50	50
Meaning of unknown words derived from context . . . . .	5	6	6	10	12
Per cent of word meanings discovered in context . . . . .	10	14	16	36	55

<sup>9</sup> Elivian, Jeanette. *Word Perception and Word Meaning in Silent Reading in the Intermediate Grades*. Ed.M. Thesis, Boston University; 1938. Appears in part in *Education*, Vol. 59 (September, 1938), pages 51-56.



seven and eight were able to identify only half the words which a later test showed they did not know. When presented with a word-definition-matching test and a paragraph in which each word was defined by context, the fourth graders were able to get correct definitions for only five of the fifty unknown words, and the pupils in the fifth and sixth grades did only slightly better in deriving meanings from the context. The pupils of the eighth grade, whose problem was a great deal lighter because they had less than half the number of words to define, were still unable to get meaning from the context in an accurate fashion. It is apparent that pupils on all levels need help in perfecting this skill. If extensive silent reading is expected to increase the child's reading vocabulary, it is important that he observe new words and utilize the context to derive the meaning.

#### DIFFERENCES IN WORD RECOGNITION AND WORD ANALYSIS

The frequency of difficulties in different types of word-mastery abilities among fourth-grade pupils is shown in Table 15. While from a practical point of view it is unnecessary to make such a detailed study of the faults in word recognition or word analysis, it is interesting to note the frequency of different kinds of faulty habits which underlie lack of success in word recognition and word analysis. 28 per cent of the pupils showed low perception in flash presentation of words; 42 per cent were satisfied by an incorrect guess at the word; and 15 per cent pronounced the word correctly but ignored the ending such as *ed*, *er*, *est*, *ing*, etc. 43 per cent of the pupils were low in their ability to solve new words by themselves, while 6 per cent would make no attempt at solving unknown words. A common difficulty was sounding parts of words without being able to combine the sounds to derive the whole word. 10 per cent of the pupils studied words

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TABLE 15

PER CENT OF WORD MASTERY DIFFICULTIES AMONG 143 FOURTH-GRADE PUPILS (Burns's Study)<sup>10</sup>

	PER CENT OF PUPILS WITH DIFFICULTY
<i>Word Recognition</i>	
Slow perception . . . . .	28
Will not attempt new words . . . . .	10
Guesses at word from general form . . . . .	42
Ignores word endings . . . . .	15
<i>Word Analysis</i>	
Has inadequate word-analysis ability . . . . .	43
Will not try difficult words . . . . .	6
Sounds aloud by single letters . . . . .	2
Unable to combine sounds into words . . . . .	29
Looks away from word after sounding . . . . .	7
Silent word study — inadequate . . . . .	10
Enunciates poorly when prompted . . . . .	10
Names of letters not known . . . . .	1
Sounds of letters not known . . . . .	1
Blends not known . . . . .	2

silently but were unsuccessful in pronouncing the words from such study. An equal number showed poor enunciation of new words.

## DIFFERENCES IN ABILITY IN STUDY SKILLS

Pupils vary considerably in the time which they require to locate information and in their success in locating the right answer. While Table 16 shows only slight differences in the average amount of time required in grades five and six to locate answers for different difficulty levels of skimming, a distribution of individual scores shows that in each skill some pupils took three times as long as others to locate the answers. Of the three types of skimming,

<sup>10</sup> *Op. cit.*

# BASIC READING ABILITIES

TABLE 16

SUCCESS AND TIME REQUIRED IN DIFFERENT TYPES OF SKIMMING ASSIGNMENTS  
(Keir's Study)<sup>11</sup>

	TIME REQUIRED		PER CENT OF SUCCESSES	
	39 Fifth-Grade Pupils	45 Sixth-Grade Pupils	Fifth-Grade Pupils	Sixth-Grade Pupils
1. Skimming to locate proper names and dates. (Five questions.) . . .	4' 20"	4'	69	80
2. Skimming to locate answers to questions which use same vocabulary as selection. (Five questions.) . . . . .	4' 46"	4' 16"	62	74
3. Skimming to locate answers to questions which use a different vocabulary from that of the selection. (Five questions.) . . . . .	5' 14"	4' 49"	39	56

locating proper names and dates is the easiest ability. Yet, despite the ease of this skill the per cent of correct answers was rather low. Since skimming is valuable for many purposes, children who are weak in this skill should be given special help. It will often be found that many pupils who make high scores on reading-comprehension tests are deficient in skimming ability.

Table 17 gives data on the ability of intermediate-grade pupils in six types of assignments which require thorough reading. The table shows both the order of difficulty of each of the six types of assignments and the differences in ability between grades. Although the selections used were

<sup>11</sup> Keir, Clarinda G. *The Relative Order of Difficulty of Four Types of Skimming*. Unpublished A.M. Thesis, Boston University; 1939.

## INDIVIDUAL DIFFERENCES

written on a suitable vocabulary and sentence-comprehension level for grade four, only 51 per cent of the total possible score was obtained on supplying minor ideas when the major ideas were given. When three summaries were suggested for each of several paragraphs (one of the summaries being too general, one applying only to a minor detail, and one being suitable for the paragraph), only 48 per cent of correct answers were obtained by pupils in the three grades combined. In retention of order of ideas the pupils first read a short selection and then were asked to number in order a list of events that appeared in the selection. Only 36 per cent of the pupils made correct answers on various paragraphs measuring this ability. Matching headlines or topics with paragraphs, putting the major idea of a paragraph in a skeleton outline where the minor ideas were supplied, and writing original headlines for paragraphs were much more difficult. Since these are

TABLE 17

ABILITY OF PUPILS IN INTERMEDIATE GRADES IN VARIOUS ASSIGNMENTS IN THOROUGH TYPE READING (Keneally's Data) <sup>12</sup>

	PER CENT OF PASSES			
	336 Pupils in Grades 4-5-6	85 Pupils in Grade 4	136 Pupils in Grade 5	115 Pupils in Grade 6
Finding minor ideas with major ideas supplied . .	51	30	51	65
Selection of best summary .	48	39	53	50
Retention of order of ideas	36	31	59	39
Matching headlines and paragraphs . . . . .	21	21	23	23
Major ideas with minor ideas supplied . . . . .	12	6	12	16
Writing original headlines .	10	4	10	10

<sup>12</sup> Keneally, Katherine G. *The Order of Difficulty of Certain Study Skills*. Unpublished Ed.M. Thesis, Boston University; 1939.

some of the abilities requisite for successful outlining, it is evident that many of these abilities will need teaching, if the child is expected to become accurate in the ability to outline.

The foregoing tables in this chapter show the extent and type of individual differences in various reading abilities and habits. They indicate what any teacher may expect to find through the use of standardized and informal tests in the classroom. While opinions will differ as to the importance of some of the abilities studied, the central fact to notice is that in every phase of reading, marked differences appeared among pupils of the same age. Anyone who will study differences among pupils in any ability will be impressed with the need of lesson plans to provide for individual differences.

### REFERENCES

The best presentation of the differences among pupils in various phases of reading is to be found in psychologies of elementary school subjects. The references are not particularly helpful for practical purposes, but are suggestive in regard to theories of reading instruction.

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## CHAPTER 4

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### CLASSROOM PROVISION FOR INDIVIDUAL DIFFERENCES

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THE goal of reading instruction is to enable each child to advance in skill and interest as rapidly as his abilities permit. This goal can be attained only by taking into account individual differences in reading level, in interest, in learning rate, and in types of difficulties, the nature and extent of which were discussed in the preceding chapter.

#### PROVIDING READING MATERIALS SUITED TO INDIVIDUAL ABILITY

The most important factor in meeting a child's reading needs is the provision of reading materials suited to his level of reading ability. Rapid improvement in pupil's reading that is secured through remedial-reading instruction is due primarily to the use of materials well suited to the reading levels of the children. A child with second-grade reading ability experiences confusion and discouragement in attempting to read fourth-grade books. Many new words are difficult for him to master, and in consequence the learning load exceeds the child's capacity. He may be able to learn six or seven new words daily, but he is completely frustrated by sixteen to twenty. A sense of security and a realization of steady growth are essential to a child's success in reading.

There are several methods of providing instructional materials suited to the child's reading ability. Each plan assumes a classroom library containing books of varied

difficulty according to the range of ability among the children. When the range of ability has been discovered (either through standard or informal tests, as described in preceding chapters), the classroom library should then be supplied with materials suited to the abilities of the pupils. There will be books both for children of limited reading ability and for those with ability beyond the particular grade. School libraries should, in particular, provide adequate reading material to widen the interests and insure the growth of pupils of limited ability. Owing to small budgets, many classroom libraries are extremely limited in the number of books available. Yet books of appropriate range of difficulty and content are so important to successful reading instruction (and other teaching) that every effort should be made to obtain them.

The following factors will serve as a guide in determining the appropriateness of library materials for individual needs in an ordinary class:

- a.* The range of difficulty of reading materials should be comparable with the range of reading ability of the pupils in the classroom.
- b.* The books at each level should supply sufficient practice for the pupils' attainment of the next higher level.
- c.* For pupils of below-grade ability, the easy books should not be those studied in the lower grades. Books already used are seldom welcomed by slow readers and tend to encourage guessing and remembering rather than actual reading.
- d.* Advanced pupils of above-grade ability should not be given books ordinarily used in higher grades. Teachers in the higher grades should have the right to certain books for initial instruction of all their pupils.
- e.* So far as possible, enough appropriate material should be provided to enable each child to read at his own level in any required unit of subject matter.

Reading textbooks are sometimes bought in the belief that every child in a certain grade, such as the third, needs a copy of the same reader for study in that grade. Instead, buying three to ten copies of each of several different readers can often be recommended as the better plan. Similarly, books on geography, history, science, and other subjects may be obtained in limited sets. Provision of many different books in the content subjects provides for differences in reading ability. The social atmosphere of the class and learning efficiency are also improved when each child can enrich the group experiences by his reading of new materials related to the topic under discussion, without being tied to the uniform assignment in which each child presents information already known to the others.

A file of clippings of news articles, anecdotes, pictures, and suggestions for activities is a most useful item of reading equipment. Separate folders should be provided for different topics. On each clipping may be placed a code number to indicate its approximate difficulty. Short, easy, and highly colorful selections should be provided for the slower pupils; longer and more difficult ones will be for the superior pupils. Pictures, maps, and diagrams provide a basis for oral reports or for further research. Pupils may help in building the file, but they must be warned against unauthorized destruction of books, maps, magazines, and similar material.

### SMALL-GROUP INSTRUCTION: FUNDAMENTAL PROBLEMS

Usually the best method of meeting individual differences is through work with small groups in the regular classroom. Results on informal tests will often indicate groups of four to six children whose instructional needs are similar. A plan for conducting such small-group instruction is outlined in the following pages. The technique suggested has been used by several hundred teachers and its

effectiveness measured. Standard tests of reading achievement usually revealed that the gain in classes so taught was about 50 per cent more than that resulting from the two- or three-level plans of grouping.

Small-group work also permits greater individual practice in oral reading than is possible in large groups. If five different groups are reading, then five children instead of one are obtaining practice.

A closer adjustment is made possible between materials of instruction and learning rate. The bright child can make steady progress and need not be held to the tedious exercises of a lower level. The slow child is not embarrassed by comparisons between his inefficiency and the success of his classmates. The dull child also gains in self-respect from successful work and develops security through continued growth in reading.

Some teachers avoid small-group work because they fear that it is confusing and that it may increase disciplinary problems. On the contrary, inattention and poor discipline are often overcome by the small-group technique. Often young teachers have difficulty in holding children's attention with the uniform assignments of two- or three-level work. With well-planned small-group assignments these teachers can motivate the reading, increase the attention, and clarify difficult problems.

The following considerations should be kept in mind in organizing small-group instruction:

1. *The groups should have common needs as determined by classroom analysis of the pupils' abilities.* (See Chapter 2.) The analysis sheet for reading abilities contains many factors and the teacher may be uncertain as to the best basis for grouping. In the primary grades the oral-reading level is the best basis. In the intermediate grades grouping may often be made on the basis of scores on word-meaning tests based on the content subjects which are being studied. Word-recognition difficulties are com-

mon in primary grades, while meaning and comprehension difficulties characterize the intermediate grades.

Occasionally it is desirable to group for special instruction in habits not related to any one reading level. Difficulties needing such attention include faulty enunciation, lip movement, head movement, improper pitch or volume of voice, and inadequate phrasing or expression. Often these difficulties may be effectively treated in small groups, regardless of the pupils' general reading ability.

2. *Grouping should be flexible.* Six groups may be suitable one day, three the next, and perhaps only one the third day, depending upon the nature of the assignment for the group.

3. *Small-group work should begin gradually.* Confusion will result if an entire class is suddenly divided into small groups. On the first day six or eight good readers should be allowed to work together with a pupil in charge. Usually bright pupils have the greatest ability in self-direction. The work will appear attractive to the slower readers if the faster ones do it first. Small-group work thus appears as a reward for good achievement. After the class has become used to one group teaching itself, another may be started. When the novelty of two or three groups has worn off, still others may be formed. Sometimes the second group may consist of the poorest readers. Thus their difficulties are not overemphasized, since they are not the last ones chosen for small-group instruction.

4. *Each group should be in charge of a pupil who ordinarily is a member of the group.* The pupil-teacher must learn how to work with his group. Almost every child has taught in a play school at home. Each child, of course, has watched the teacher's methods. But the pupil-teacher needs some private instruction in handling the day's lesson. He should examine the lesson plan to determine exactly how it is to be used. Then he will be able to ask the teacher questions before taking charge of the group.



The lesson may be too difficult for a pupil-teacher who has received only a small amount of instruction. If so, the lesson should be simplified by use of easier books or by a shorter assignment. Some teachers prefer to have superior pupils teach the slower groups. If carefully directed in group instruction, the superior pupil obtains desirable personal development. He grows in sympathy, leadership, understanding of others' difficulties, oral expression, patience, and additional mastery of the material. This growth in social habits will offset loss of time otherwise devoted to independent learning.

Sometimes a group secretary is used. He records difficult words, lists questions to discuss with the teacher, and relieves the group leader of other distracting duties. Even when the room teacher is in charge, a group secretary is helpful.

5. *Small-group work demands care in planning the assignments.* If the teacher does not have time to plan small-group work, this method should not be used. Successful small-group assignments should be saved from year to year. The teacher thus gradually acquires a file of plans which make possible an increasing use of small-group work. Assignments saved from previous years should contain notes for revision.

The steps to be followed by the pupil-teacher, who is the leader of a group, should be indicated clearly for him on paper. A good assignment for small-group oral work should have these characteristics:

- a. The material should be suited to the ability of the group. It should not contain more words than the pupils can learn in a single day.
- b. The audience situation should be genuine, thus providing reasons for listening for those not taking part in the actual reading. Chapter 6, on oral reading, suggests several types of audience situations.



- c. Word-recognition or word-meaning drill should be provided prior to the reading. This may be done by scanning the selection for difficult words and providing exercises for their recognition or meaning. Chapter 8, on word meaning and recognition, provides many suggestions.
- d. Some check on comprehension is needed, and the type of exercise to be used should be known in advance by the children. As a child listens to the reading he should have a definite purpose in mind. Several types of comprehension checks are presented in Chapter 6.
- e. There must be provision for motivation. If the stories read by the various groups are related to a central theme, classroom discussions, exhibits, and other activities can motivate the various group lessons. If the story is not related to a central theme, study questions or suggestions for special observation used prior to the reading should serve to arouse an initial interest.
- f. The length of the unit to be read by each pupil should be indicated in the pupil-teacher's book. Otherwise members of the group may feel that they are being asked to read too little or too much.
- g. The lesson plan must take into account the needs of the pupils in the group. (See item No. 6, below.) If most of them are weak in oral phrasing, phrase drills should be included. These are given in Chapter 6, on oral reading. If the group needs help in word mastery, these skills should be stressed at the end of the lesson. Many appropriate exercises are included in Chapter 8, on word mastery.
- h. Word-mastery exercises are not generally used in the daily oral-reading lesson. However, such exercises should be provided. Children can use them at the end of the period after completing the assigned work.
- i. The lesson plan may also include review exercises for words taught in previous lessons. It may also have

exercises in locating information, improvement or written summaries, or other needed study skills.

Sample lesson plans are included on pages 82 and following.

6. *In preparing the lesson plan a list of pupil needs should be at hand.* This may be based on the results of the informal tests described in Chapter 2. It should consist of a check list of pupil needs in these general fields:

- a. Self-direction and interest in reading
- b. Oral reading
- c. Silent reading
- d. Word-recognition and word-mastery needs
- e. Instructional needs in the study skills
- f. Needs in oral and written recall

7. *All exercises to be used in small-group work should first have been demonstrated by the classroom teacher.* Children are imitative and can remember activities which they have seen. The demonstrations of new methods will reduce confusion and save time.

### TYPES OF SMALL-GROUP ORGANIZATION

Small-group work may be variously organized, depending mainly upon availability of books to fit various levels of reading ability. From types of organizations suggested below the teacher should choose the most practical one for her purpose.

#### A UNIFYING CENTER OF INTEREST

An interest center may be chosen for the entire class, if reading materials on different levels of ability can be provided for the various groups. With books available on different reading levels, each group can then use similar content material appropriate to its vocabulary ability.

Class activities will serve to motivate the reading of various groups, and after the reading is done, discussion will enable members of various groups to exchange ideas gathered from their reading. This organization of small groups unifies the class and gives a sense of progress toward a common goal related to the interest center.

Slower learners profit by the discussions of capable pupils, based on their reading of more advanced books. Contributions of slower learners are sympathetically received, since these pupils are not in competition with brighter ones. When all children read the same assignment, often slower learners contribute little to brighter pupils. Also this plan facilitates correlation of reading with composition, art, music, and other content subjects. It provides enrichment prior to the lesson and aids discussion after the reading. The chief difficulty in carrying out this plan of organization lies in obtaining suitable books on various reading levels.

#### INDEPENDENT GROUP INTERESTS

Small-group work is possible for groups with different reading interests. When materials on different levels are not available for an interest center, the most effective method is to assign books that fit the proper level and let the groups work at their various interests. However, if materials are of the same general type — as, for example, adventure stories, animal stories, sea stories, etc. — some correlation between the work of various groups may be possible.

#### CLASS PREPARATION AND GROUP RECITATION

Under this plan the entire class or one section of it prepares for reading and then small groups separate for recitation. This scheme is useful in classes that are divided on two or three ability levels and when reading materials are available for only those levels. The class engages in ac-

tivities and discussions related to the general topic. Thus the story to be read is enriched and the interest heightened. Emphasis is also given to the mechanics of reading, through word-recognition and word-mastery exercises, phrase drills, and meaning-vocabulary work. After these preparatory exercises, the class divides into small groups for oral reading or study.

One of the first things done by the pupil-teachers after the groups separate for recitations is to test each child on recognition of difficult words. Care should be taken that the words are actually known and not merely memorized during the previous reading. Words written on the board or on a card for the pupil-teacher should be read in different orders. The pupil-teacher is aided if the recognition-exercise card contains the same words in three lists, each in a different order. After completion of the word-recognition exercises pupils read orally as called on by the pupil-teacher. The various groups may then reassemble for class discussion, they may take a short test, or they may work on individual comprehension exercises based on the material read.

#### UNIT-ADJUSTMENT PLAN

This plan of small-group organization is based on assignments in a single textbook for the entire class. It is less desirable than the plans previously discussed, since it assumes that all members of the class will read the same book. However, if only one set of readers is available, this plan provides some adaptation of instruction to the various learning rates in the class.

Approximately two weeks of work in the basal reader is assigned at one time. All groups start the unit together, and each works through the entire unit at its own rate. Supplementary stories and activities are provided for groups finishing ahead of schedule, such enrichment work serving to motivate the entire class and to provide for activities.

The unit of work should be divided into a few large sections for students who comprehend well and have few word-mastery or vocabulary difficulties. It should be divided into smaller sections for children needing more drill on reading mechanics or on comprehension of the story content. Each group should preface its reading with the word-mastery drill and follow the reading with comprehension exercises.

### UTILIZING INDEPENDENT READING

Extensive independent reading by a child is valuable training for improvement of reading. It alone is not adequate, however, for children with severe learning difficulties; such children need guidance in overcoming faulty habits and establishing vocabulary mastery and other reading skills. But rapid learners and superior readers undoubtedly gain more from extensive individual reading than from instruction which is perhaps beneath their present attainments.

It is safe to say that almost any child profits by independent reading on his own level, completely apart from other members of the class. Zirbes,<sup>1</sup> Field,<sup>2</sup> and Boney<sup>3</sup> have shown that in the elementary school gains resulting from individual reading are comparable to those resulting from class instruction, even without special remedial exercises for slow learners. Zirbes, however, suggests restricting independent reading to pupils reading above first-grade level, at a rate of at least sixty words per minute and with a maximum of two errors in sixty running words. Probably

<sup>1</sup> Zirbes, Laura. *Practice Exercises and Checks in Silent Reading in the Primary Grades*. Bureau of Publications, Teachers College, Columbia University; 1925.

<sup>2</sup> Field, Helen A. "Extensive Individual Reading versus Class Reading." *Contributions to Education*, No. 394. Teachers College, Columbia University; 1930.

<sup>3</sup> Boney, C. De Witt. "A Study of Library Reading in the Primary Grades." *Contributions to Education*, No. 578. Teachers College, Columbia University; 1933.

with materials of appropriate difficulty and with proper motivation, gains through individual extensive reading would exceed those obtained from classroom instruction and uniform textbooks.

Individual reading is essential with any kind of class group instruction. The child must acquire habits of security and pleasure in independent reading. These habits cannot be attained when all reading is assigned and supervised by the teacher. While an occasional teacher can build an entire reading program around individual assignments, with no other instruction offered, most teachers find extreme individualization difficult to administer. The following plans have proved useful in guiding individual reading programs:

1. *The teacher should keep a record of the amount and type of each child's leisure reading.* This record may take different forms as the teacher may elect. Some teachers use large charts for the types of material read in the grade, such as fairy stories, travel, adventure, and science. Along the left-hand margin of the chart are written the children's names, and across the top the names of the books recommended. When a child completes a book, a check is placed beside his name. This record enables the teacher to make sure the child is sampling books of various types.

Another recording method involves the use of a large chart with a pocket beside each child's name. In this are placed slips with the titles of the books read by the child. A pocket can be provided for each type of book suggested for the particular grade.

A third method makes use of a teacher's record book with a page for each child listing the various classifications of reading. A record is made of the titles under each classification read by the child.

The child may keep a personal notebook of his own accomplishments in various subjects. Several pages may be devoted to the independent leisure reading. From time to



time the teacher should examine these notebooks to see whether or not the child is following a balanced reading program.

2. *There should be reports on the books read.* Children respond to independent reading when provided with opportunities to discuss books informally. Some teachers themselves keep notebooks of questions and comments relating to books and stories commonly read outside by children. These questions and comments are introduced informally in conversation with pupils before school or at recess period. This method usually stimulates more interest and feeling of importance for the pupil than does the required book report. Book reports placed on cards and filed under each child's name are often formal and impersonal.

If book reports are kept, they should serve primarily as convenient means of refreshing the memory relative to stories read previously. Usually a card with the names of the major characters and a general description of the plot will be adequate to recall the story.

Adults often discuss with others books they are reading or have just finished. Such books are recalled more frequently and provide more opportunities for conversation than those read privately with no exchange of impressions.

3. *The child should be guided in choosing books suited to him.* A practical method for determining a book's fitness for a child consists in opening it near the middle and having the child read orally for one hundred words. The teacher may then judge whether the material is beyond the child's comprehension and reading ability. Ordinarily it is not desirable to recommend books in which the child encounters more than one difficult word in thirty running words unless he is exceptional in word analysis. Often, however, a child's interest in a subject stimulates him to read materials which ordinarily would be too difficult for him. This is a matter for individual, personal adjustment.

One of the most difficult problems in connection with

individual leisure reading is to find books for poor readers. They are unable to read materials which appeal to them intellectually, and books appropriate to their reading ability lack interest for them. For such pupils the book list provided in Chapter 5, pages 112-114, is helpful. This list indicates both the book's level of reading difficulty and its range of interest.

### INDEPENDENT READING IN RELATION TO CONTENT SUBJECTS

The complaint is sometimes made that formal education consists of several years of superficial contact with various fields of study but with no real mastery of anything. Probably the knowledge in which either a child or an adult takes pride is characterized by some special achievement. Long-time assignments are designed to offset the usual shallowness and particularly to stimulate superior pupils. Occasionally, the long-time assignment is an effective method of rebuilding the interest of a discouraged or misbehaving child.

The long-time assignment is of greatest value when it parallels work in geography, history, science, and other content subjects. For example, in geography a child can specialize in agriculture, mining, climate, industry, or transportation and give special reports relating to various sections of regional geography. In history the child can follow the story of furniture, rugs, dishes, transportation, growth of cities, agricultural and industrial development, the biographies of eminent men, or inventions in various fields. Such studies enable him to give interesting reports to the class on different phases of the regular work. However, ordinarily it is preferable to assign the child special topics connected with the content subjects. The assignment should be made two or three weeks in advance of the date for the class discussion. It is desirable, too, that special

topics be studied and reported in class so that the entire group benefits by the individual's investigation. Unfortunately, topics for further reading and individual investigation usually come at the ends of chapters of textbooks.

When a child makes an oral report he should be helped in providing illustrations to maintain the interest of the class. An effective measure of oral composition is the attention which the class pays to these special reports. If the listeners are inattentive, it is the fault of the speaker rather than the audience. The child must learn how to present his ideas with pictures, charts, diagrams, graphs, and outlines.

The child must not take up too much class time. If his report is too long for oral presentation, he should prepare part of it as a short booklet for the library table. The merit of the booklet can be determined to an extent by the demand of other pupils for it. If poorly written and illustrated, no one will borrow it, while a well-illustrated and cleverly written book will be in demand.

Intermediate-grade children should learn how to use reference material and how to look for information. This training may be part of the regular language instruction. The child should also learn how to make a study plan for directing his independent reading. This plan should include easy illustrated books for use at the beginning of his study, more difficult books for later stages, as well as lists of things to do, places to visit, and other activities based on the reading.

Reading plans are particularly valuable for the child who needs direction for his summer's reading. If adults too made such plans, they would derive increased pleasure from outside reading and would find increased growth with each year of reading. Without a plan there may be little growth, the books of last month being forgotten as those of the next month are read.

### USING WORKBOOKS AND JOB SHEETS

Workbooks which accompany most basal readers are intended to guide the child. Usually, however, the child who is poor in reading is unable to work independently. In individual instruction, workbooks may be helpful in overcoming faulty habits, but the child must be able to work by himself.

Some teachers find it helpful to prepare job sheets or assignment cards to accompany supplementary readers. These cards may contain several kinds of assignments to overcome types of errors found through informal tests. The exercises may be planned to give help in word recognition, word meaning, speed of locating information, maintaining attention in silent reading, improving written summaries, increasing reading speed, or other necessary skills.

These cards are inserted in the book at the beginning of the story. As the child begins to read he is given a specific assignment. The assignment, of course, is made before the reading starts, the child thus understanding the goal and adapting his study to it.

### HOMOGENEOUS GROUPING IN AN ENTIRE SCHOOL

Often the reading period comes at the same hour throughout an elementary school. If this is the case, each teacher can specialize on one level of reading achievement and be assigned all children on that level for the reading hour. The child remains at each level until his growth in reading permits his entrance to the next level.

This plan has some desirable features, such as the teacher's concentration on a particular task. It has some undesirable features also, and it requires much thought for successful operation. A young child who is making rapid growth in reading probably does not belong with older children, even though his ability entitles him to promotion. Enrichment

on his own social level might be preferable to acceleration. Older children do not like to be classed with younger ones even when they need instruction in earlier phases of reading. However, when this plan has been in effect for some time, retardation loses its importance. Children under the system do not expect promotion without earning it.

Some schools use the following interesting method of instructional grouping: During the first morning period all children have arithmetic, each child going to the teacher who specializes on his ability level. The same plan is used for spelling, writing, and reading mechanics at other periods. During the second morning period, grouping is on age level, all children of the same age assembling for instruction in the content subjects, such as history, geography, and science. Books on various reading levels cover the course of study in each subject for the grade. Instruction in music, art, and crafts is also given to groups of similar age. Children are promoted each year both in content subjects and in the art subjects which lend themselves to instruction in groups of similar age. Promotion in arithmetic, spelling, handwriting, and reading mechanics is based upon growth in skill. One school uses a third grouping, based on leisure interests, a period being set aside for club work and craft activities. Without regard to age, children with common interests assemble for instruction in these activities.

Homogeneous grouping in reading does not imply that individual differences are ignored. Small-group work and individualized instruction are still necessary to care for various rates of progress, differences in achievement within grade levels, and differences in basic abilities composing particular reading levels. While homogeneous grouping throughout a school is sometimes an unwieldy general plan, it often aids in overcoming certain kinds of reading handicaps. Every school has different needs and occasionally a system of teaching reading develops a particular weakness which homogeneous grouping can correct. If many chil-



dren have difficulty in word mastery, they may assemble two or three times a week for instruction in methods of word analysis. Similarly, other weaknesses may require temporary grouping for special corrective or remedial measures.

### REFERENCES

Grouping for instruction and other means of providing for individual differences are discussed in the following books:

- HOCKETT, J. A., and JACOBSEN, E. W. *Modern Practices in the Elementary School*, Chapter VIII. Ginn & Co., Boston; 1938.
- National Society for the Study of Education. *Thirty-Fifth Yearbook*, Part I. *The Grouping of Pupils*. Public School Publishing Company, Bloomington, Illinois; 1936.
- STONE, C. R. *Better Primary Reading*, Chapters V and VIII. Webster Publishing Company, St. Louis; 1936.
- WASHBURN, C. W. *Adjusting the School to the Child*, Chapters IV and V. World Book Company, Yonkers-on-Hudson, New York; 1932.

Suggestions for developing literary appreciation and independent reading interests may be found in:

- McKEE, PAUL. *Reading and Literature in the Elementary School*, Chapters XIII and XIV. Houghton Mifflin Company, Boston; 1937.
- National Society for the Study of Education. *Thirty-Sixth Yearbook*, Part I. *The Teaching of Reading: A Second Report*, Chapter VI. Public School Publishing Company, Bloomington, Illinois; 1937.
- WITTY, PAUL, and KOPEL, DAVID. *Reading and the Educative Process*, Chapter II. Ginn & Co., Boston; 1939.

### SAMPLE LESSON PLANS FOR SMALL-GROUP WORK IN GRADE 1

#### Group I; Pupil-Teacher; Best Group

- TREADWELL, H. T., and FREE, M. *The Gingerbread Boy*, page 12. Row, Peterson & Co.; 1930.
- BRYCE, C. T., and HARDY, R. L. "The Cooky-cake Man" from *Playtime*. Newson & Co.; 1927.

1. Pupil-teacher has book, others typewritten copies of story (each one a section).
2. Arouses interest with pictures; new vocabulary: *gingerbread*.



3. Pupil-teacher introduces story, tying it up with Cooky-cake Man, and assigns a section to each child.
4. Silent study of parts.
5. Oral reading.
6. Discussion — comparison with Cooky-cake Man.

### Group II; Pupil-Teacher; Average Group

BRYCE, C. T. "The Toy Doctor" from *Toyland*, page 19. Newson & Co.; 1928.

To follow toy shop unit.

1. Introduce story through picture in book.
2. Presentation of new vocabulary and discussion; new vocabulary: *doctor, broken, mend*.
3. Rapid flash drill of new words.
4. Phrase cards:

<i>had his horn</i>	<i>Toy Doctor</i>
<i>is broken</i>	<i>walked on</i>
<i>will mend it</i>	

5. Silent study of individual sections.
6. Audience reading.
7. Comprehension test: *Yes* and *No* questions.

### Group III; Pupil-Teacher; Low Group

BRYCE, C. T., and HARDY, R. L. "Betty and the Toys" from *Playtime*, page 34. Newson & Co.; 1927.

1. Vocabulary — anticipation and enrichment: *your, break, put, live*.
2. Phrase work: new words in phrases; find them in books.
3. Rapid phrase drill.
4. Silent reading to answer questions.
5. Oral reading: read the story as a dramatization.
6. Comprehension: multiple-choice test.

### Group IV; Room Teacher; Poorest Group

No book is used in this lesson. The material is of pre-primer level.

1. Vocabulary review, using pictures as dictionary idea: *Mother, Ted, flowers*.
2. Each child given word to match on picture.
3. Flash-card drill on vocabulary.
4. Flash-card drill, using these words in phrases with known words: *Ted's hat, pretty flowers, red flowers, a big boy, Mother and Ted*.
5. Teacher builds sentences with *Here is, Here are, This is*.
6. Children make sentences for the other children to read.

SAMPLE LESSON PLANS FOR SMALL-GROUP WORK  
IN GRADE 4

Group I; Pupil-Teacher, George C.

Reading level: Grade 6

This group works on a mining project to be presented later in geography class. Each pupil is reading on some specialized topic.

Group II; Pupil-Teacher, Alice B.

Reading level: Grade 5

This group is working on an assembly program in which poetry concerning nature is to predominate. The pupils are selecting and organizing suitable material.

Group III; Pupil-Teacher, Mary H.

Reading level: Grade 4

O'DONNELL, M., and CAREY, A. "Carl, the Herdboy" from *If I Were Going*, page 44. Row, Peterson & Co.; 1936.

1. Review yesterday's words (tachistoscope).
2. Word presentation (4 words).
3. Phrase drill (stress smooth, rapid reading).
4. Silent study of selections to be read.
5. Oral reading (audience situation).
6. Comprehension check: matching exercise.
7. Discuss possibilities of dramatizing the story.

Group IV; Pupil-Teacher, John H.

Reading level: Grade 3

MASTERS, K. W. "Visitors from the Park" from *The Pet Club*, page 209.  
D. C. Heath & Co.; 1937.

1. Review words and phrases by flash cards.
2. Present 4 new words.
3. Word-building exercise on board.
4. Phrase drill (masked pages).
5. Silent reading of story.
6. Comprehension check: completion.
7. Make an illustration of the part of the story you liked best.

Group V; Pupil-Teacher, Roland N.

Reading level: Grade High second

O'DONNELL, M., and CAREY, A. "Pig-a-Wee" from *Friendly Village*, page 68. Row, Peterson & Co.; 1936.

1. Review yesterday's vocabulary (story written by teacher, including all words taught).
2. Word presentation (4 words).
3. Phrases presented in tachistoscope.
4. Matching exercises (words and meaning).
5. Audience reading.
6. Comprehension check (each child given a question to answer prior to reading): one question for each page read.
7. If time permits, play "Rummy" (game built with specific words taught in this group).

Group VI; Classroom Teacher

Reading level: Grade Low second

GRADY, W. E., KLAPPER, P., and GIFFORD, J. C. "Little Bear" from *Stories for Every Day*, page 130. Charles Scribner's Sons; 1933.

1. Review words taught last week.
2. Presentation of 3 new words.
3. Enrichment of words through pictures.

4. Flash-card word drill.
5. Presentation of phrases.
6. Entire story read in phrases (story typed in phrases — used in large tachistoscope).
7. Comprehension check: word-meaning test to check new vocabulary.
8. Play “Wordo” (game built with words taught this week).

GRADED LIST OF BOOKS FOR A TEACHING UNIT ON  
ANIMALS IN THIRD GRADE

A unit about animals for a third grade might include stories of farm animals, domestic animals, circus animals, and jungle animals. Sand-table projects and art work would be different for each group and provide necessary illustration for class reports. The following books range from primer level through fourth reader and include stories of all the different types of animals:

*Primer Level*

- GRADY, W. E., KLAPPER, P., and GIFFORD, J. C. *Pets and Playtime*. Charles Scribner's Sons; 1932.
- JOHNSON, E. M. *Circus*. American Education Press; 1934.
- SUMMY, E. I. *The Zoo*. Educational Printing House; 1935.
- AVERHART, F., and McCRORY, M. *How Animals Travel*. American Education Press; 1935.

*First-Reader Level*

- Troxell, E., and Dunn, W. F. *Baby Animals*. Row, Peterson & Co.; 1928.
- Hahn, J. L. *Everyday Friends*. Houghton Mifflin Company; 1935.
- Storm, Grace E. *Good Times Together*. Lyons & Carnahan; 1937.
- Gates, A. I., Huber, M. B., and Peardon, C. C. *Down Our Street*. The Macmillan Company; 1939.

*Second-Reader Level*

- McCrory, M. *Man's Animal Helpers*. American Education Press; 1936.
- Smith, J. *Animals and Their Babies*. American Education Press; 1934.
- McCrory, M. *Where Animals Live*. American Education Press; 1935.
- Myers, E. A. *Pets and Friends*. D. C. Heath & Co.; 1937.
- Craig, G. S., and Baldwin, S. E. *Out-of-Doors*. Ginn & Co.; 1932.

### *Third-Reader Level*

LEWIS, W. D., and ROWLAND, A. L. *The Wonder World*. John C. Winston Company; 1937.

DAVIS, G. *Protection in Nature*. American Education Press; 1935.

MORSE, C. F., and NELSON, D. *Baby Animals*. Follett Publishing Company; 1930.

### *Fourth-Reader Level*

MORSE, C. F. *Wild Animals at Home*. Follett Publishing Company; 1935.

O'BRIEN, J. S. *Sled Dogs in Snowland*. Follett Publishing Company; 1936.

LYMAN, ROLLO L., MOORE, NELLE, HILL, H. C., and YOUNG, E. *Treasury of Life and Literature: Vol. I*. Charles Scribner's Sons; 1937.

PARKER, B., and HARRIS, J. M. *Exploring New Fields*. Houghton Mifflin Company; 1938.

## GRADED LIST OF BOOKS FOR A TEACHING UNIT ON CHINA

These books were chosen to supplement the geography textbook. They include reading material on five grade levels, and for each level there is practically the same information. In the work on this unit each group reads to find information concerning the living customs, types of shelter, clothing, transportation, schools, recreation, and physical and political divisions of the country. Each group was made responsible for an oral report to the class on one particular phase of the subject.

### *Second-Grade Level*

FLACK, M., and WIESE, K. *Story about Ping*. Viking Press, Inc.; 1933.

HEADLAND, I. *Chinese Mother Goose Rhymes*. Fleming H. Revell Company; 1900.

WIESE, K. *Liang and Lo*. Doubleday, Doran & Co., Inc.; 1930.

### *Third-Grade Level*

CARPENTER, F. G. *Around the World with the Children*, pages 59-73. American Book Company; 1924.

LATTIMORE, E. F. *Little Pear and His Friends*. Harper & Brothers; 1934.

ROWE, D. *Rabbit Lantern*. The Macmillan Company; 1925.

WIESE, K. *Chinese Ink Stick*. Doubleday, Doran & Co., Inc.; 1929.

## BASIC READING ABILITIES

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### *Fourth-Grade Level*

- CARPENTER, F. G. *Our Neighbors Near and Far*. American Book Company; 1933.
- ELDRIDGE, E. J. *Yen-foh, a Chinese Boy*. Albert Whitman & Co.; 1935.
- HOWARD, A. W. *Ching-Li and the Dragons*. The Macmillan Company; 1931.
- ROWE, D. *Traveling Shops*. The Macmillan Company; 1929.

### *Fifth-Grade Level*

- CHRISMAN, A. B. *Shen of the Sea*. E. P. Dutton & Co., Inc.; 1925.
- HOLLISTER, M. B. *River Children*. Dodd, Mead & Co., Inc.; 1935.
- PERKINS, L. F. *Chinese Twins*. Houghton Mifflin Company; 1935.

### *Sixth-Grade Level*

- CHRISMAN, A. B. *The Wind That Wouldn't Blow*. E. P. Dutton & Co., Inc.; 1927.
- FRANCK, H. A. *China*. F. A. Owen Publishing Company; 1927.
- LEE, Y. P. *When I Was a Boy in China*. Lothrop, Lee & Shepard Company; 1887.
- OLCOTT, F. J. *Wonder Tales from China Seas*. Longmans, Green & Co.; 1925.

## GRADED LIST OF BOOKS FOR TEACHING UNIT ON BOATS IN FOURTH GRADE

### *Second-Grade Level*

- LENT, H. B. *Tugboat*. The Macmillan Company; 1936.
- TOUSEY, S. *Steamboat Billy*. Doubleday, Doran & Co., Inc.; 1935.

### *Third-Grade Level*

- HADER, B. *Tommy Thatcher Goes to Sea*. The Macmillan Company; 1937.
- EGGLESTON, E. *Stories of American Life and Adventure*. American Book Company; 1923.
- KEITH, L. J., and FOLLETT, D. W. *Boats*. Follett Publishing Company; 1937.
- BERNSTEIN, D. *Judy's Ocean Voyage*. American Book Company; 1932.
- CURTIS, N. C. *Boats*. Rand McNally & Co.; 1927.
- WYGANT, E. *Wheel, Sail, and Wing*. Follett Publishing Company; 1937.

### *Fourth-Grade Level*

- SPERRY, ARMSTRONG. *All Sails Set*. John C. Winston Company; 1935.
- WILSON, H. E., and Others. "Story of Ships," pages 389-395; "Boats



among the Islands of Venice," pages 441-447; "Trading around the World," pages 453-460 — from *Where Our Ways of Living Came From*. American Book Company; 1937.

HALL, J. *Viking Tales*. Rand McNally & Co.; 1930.

DUKELOW, J. H., and WEBSTER, H. H. *The Ship Book*. Houghton Mifflin Company; 1931.

PETERSHAM, M. F. and M. *Story Book of Wheels, Ships, Trains, and Aircraft*. John C. Winston Company; 1935.

HARTER, H. *How We Travel*. Follett Publishing Company; 1930.

## Fifth-Grade Level

HURLEY, B. J. "Boats" from *Unit Study Book No. 303*. American Education Press; 1934.

RUGG, H. O., and KRUEGER, L. *The Building of America*, Chapter 4. Ginn & Co.; 1936.

## Sixth-Grade Level

INGERSOLL, E. *The Book of the Ocean*. D. Appleton-Century Company, Inc.; 1936.

CHAFFEE, A. *Heroes of the Shoals*. Henry Holt & Co., Inc.; 1935.

HORST, C. W. *Model Boats for Juniors*. Bruce Publishing Company; 1938.

## GRADED LIST OF ADVENTURE STORIES FOR A UNIT IN FIFTH GRADE

A unit on adventure and exploration, based upon stories, was built for a fifth-grade class having a range in reading ability from grades three to seven. Oral reports made to the class formed the basis of many interesting discussions, such as comparison of methods of transportation in modern and pioneer days, hardships endured, and the values of the expeditions.

## Third-Grade Level

JOHNSON, E. M. "Cowboys" from *Unit Study Book No. 210*. American Education Press; 1934.

HARDY, M. "Daniel Boone" from *Best Stories*, page 94. Children's Own Way Series. Wheeler Publishing Company; 1927.

HORN, E., and MCBROOM, M. "A Brave Pioneer" from *Learn to Study Readers*, Book III, page 15. Ginn & Co.; 1925.

EVERSON, F. M., and POWER, E. L. *Early Days in Ohio*. E. P. Dutton & Co., Inc.; 1928.

SHAW, E. R. *Discoverers and Explorers*. American Book Company; 1900.

## BASIC READING ABILITIES

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### *Fourth-Grade Level*

- ENGLISH, M., and ALEXANDER, T. "Great-Grandfather's Story" from *Wheels Westward*, Book IV, page 98. Happy Hour Readers. Johnson Publishing Company; 1938.
- ELSON, W. H., and Others. "Jonathan Bartlett, A Pioneer Lad" from *Elson-Gray Basic Readers*, Book IV, page 80. Scott, Foresman & Co.; 1936.
- PARKER, B., and HARRIS, J. M. "Taming a Western River" from *Exploring New Fields*, Book IV, page 351. Child Development Readers. Houghton Mifflin Company; 1938.
- LEAVELL, U. W., BRECKENRIDGE, E. G., BROWNING, M., and FOLLIS, H. "Buffalo Bill" from *Trails of Adventure*, page 238. The Friendly Hour Reader, Book IV. American Book Company; 1936.
- DAVIDSON, I., and ANDERSON, C. J. "Two Brass Kettles" from *The Lincoln Readers*, Book III, page 87. Laurel Book Company; 1929.
- BRIDGES, T. C. *Young Folks' Book of Discovery*. Little, Brown & Co.; 1925.
- CLARK, C. *Westward to the Pacific*. Charles Scribner's Sons; 1932.
- BRINK, C. R. *Caddie Woodlawn, a Frontier Story*. The Macmillan Company; 1935.

### *Fifth-Grade Level*

- BARTLETT, B., and Others. *Boy Scout's Book of True Adventure*. G. P. Putnam's Sons; 1931.
- GORDY, W. F. *Stories of American Explorers*. Charles Scribner's Sons; 1906.
- McMURRY, C. A. *Pioneers on Land and Sea*. The Macmillan Company; 1904.
- PUTNAM, B. *David Goes to Baffin Land*. G. P. Putnam's Sons; 1927.
- PUTNAM, B. *David Goes Voyaging*. G. P. Putnam's Sons; 1925.
- SHAW, E. R. *Discoverers and Explorers*. American Book Company; 1900.

### *Sixth-Grade Level*

- BARRY, M. E., and HANNA, P. R. *Wonder Flights of Long Ago*. D. Appleton-Century Company, Inc.; 1930.
- BRITT, A. *The Boy's Own Book of Adventurers*. The Macmillan Company; 1923.
- HORTON, E. *The Frozen North*. D. C. Heath & Co.; 1911.
- MACLEAN, J. K. *Heroes of the Farthest North and Farthest South*. The Thomas Y. Crowell Company; 1930.

*Seventh-Grade Level*

- BRIDGES, T. C., and TILTMAN, H. H. *Heroes of Modern Adventure*. Little, Brown & Co.; 1927.
- BYRD, RICHARD E. "My Flight over the Atlantic" from *Boy Scout's Book of True Adventure*, pages 121-134. G. P. Putnam's Sons; 1928.
- ELLSWORTH, L. *Exploring Today*. Dodd, Mead & Co., Inc.; 1935.
- LINDBERGH, ANNE. *North to the Orient*. Harcourt, Brace & Co., Inc.; 1935.
- LINDBERGH, CHARLES A. *We*. G. P. Putnam's Sons; 1927.
- O'BRIEN, J. S. *By Dog Sled for Byrd*. Thomas S. Rockwell Company; 1931.
- SIPLE, P. *A Boy Scout with Byrd*. G. P. Putnam's Sons; 1931.

FIFTH-GRADE UNIT ASSIGNMENT — MEDITERRANEAN COUNTRIES

In teaching the content subjects, the intermediate-grade teacher may use the long-time assignment as a means of motivation to promote extensive independent reading. The class should be divided into many small groups in order that the pupils may work well together or do independent research if they so desire. The groups do not necessarily need to be composed of children of the same reading grade level if the teacher has provided for individual differences in reading ability in selecting the materials. The pupils should be allowed three or more weeks to prepare their reports for the class. The teacher should suggest many problems to be solved, but whenever possible the children should be allowed to select their own problems. The problems may be written on index cards, with suggestions as to references, constructive work, and illustrative material that would make the reports more interesting.

Each group should select a child to act as chairman and one to make the report to the class. The child who makes the report must be made to feel the responsibility for presenting his material in such a way that it will be interesting to the class and so that they will retain all the major ideas he presents. One method of checking class interest and attention is to have each group build a simple test to give to the class several days after the report has been made. By checking the test the

group will be able to measure how well the ideas presented have been retained.

The following long-time assignment was built for a fifth-grade class studying the Mediterranean countries. The problems were selected three weeks in advance. The children were allowed to work on the assignment during their geography period and in any spare time they had. The pupils worked independently, with aid from the teacher whenever it was requested.

### Group I. Travel

1. Make specific plans for a Mediterranean cruise.
2. Secure travel folders, charts, and maps for information.
3. Find the cost of traveling (all classes).
4. Describe the liner (use illustrations): cabins, crew, entertainment, recreation, menu.
5. Secure a passport to show to the class. How and where would you get a passport?

### REFERENCES

Travel folders from various agencies (maps, chart of liner).

Current magazine articles.

Newspaper articles and advertisements.

			READING GRADE LEVEL
CARPENTER, F.	<i>The Ways We Travel</i>	American Book Company; 1929	4
PRYOR, W. C.	<i>The Steamship Book</i>	Harcourt, Brace & Co.; 1934	3

### Group II. Italy

1. Plan an itinerary for class.
2. What cities shall we plan to visit? Why?
3. Which famous buildings and churches shall we visit? Tell at least one interesting fact about each.
4. Find out as much as you can about the industries.
5. Use as many pictures as you can to make your report interesting.

REFERENCES			READING GRADE LEVEL
BRANN, ESTHER	<i>Nicholina</i>	The Macmillan Company; 1931	4
BOTSFORD, F. H.	<i>Pictures Tales from the Italian</i>	Frederick A. Stokes Company; 1929	3
CARPENTER, F. G.	<i>Europe</i> (pages 413-456)	American Book Company; 1924	5
FORBES, H. C.	<i>Mario's Castle</i>	The Macmillan Company; 1928	6
HEWINS, C. M.	<i>A Traveler's Letters to Boys and Girls</i>	The Macmillan Company; 1923	7
PERKINS, L. F.	<i>Italian Twins</i>	Houghton Mifflin Company; 1920	4

### Group III. Customs of Italy

1. What is the native dress of the country?
2. Can you find some information about Italian dances and music? Bring a phonograph record to class.
3. Compare Italian schools (past and present).
4. Be able to tell a Roman myth to the class.
5. Find out what you can about kinds of food.
6. Illustrate your reports by pictures, charts.

REFERENCES			READING GRADE LEVEL
AMBROSI, M.	<i>When I Was a Girl in Italy</i>	Lothrop, Lee & Shepard Company; 1906	4
CAPUANA, L.	<i>Nimble-Legs</i>	Longmans, Green & Co.; 1927	4
BALDWIN, J.	<i>Thirty More Famous Stories Retold</i> (pages 177-196)	American Book Company; 1905	3
FARJEON, E.	<i>The Italian Peep-Show</i>	Frederick A. Stokes Company; 1926	5
MAWDSLEY, M. D.	<i>Children of Italy</i>	Thomas S. Rockwell Company; 1931	3
KYLE, A. D.	<i>Red Sky over Rome</i>	Houghton Mifflin Company; 1938	6
CARPENTER, F. G.	<i>Our Neighbors Near and Far</i>	American Book Company; 1933	4

## Group IV. Volcanoes

1. Locate the volcanoes.
2. Are there any active volcanoes in Italy at present?
3. What causes volcanoes to erupt?
4. What effect do the eruptions have on the land? on the people?
5. Make a picture showing a volcano. Be able to explain causes of eruption (show the process in the picture).

### REFERENCES

*Book of Knowledge*, Vol. 7, page 2313.

*Compton's Pictured Encyclopedia*, Vol. 14, page 331.

*World Book Encyclopedia*, Vol. 17, page 7560.

			READING GRADE LEVEL
HAWKS, E.	<i>Book of Natural Wonders</i>	Loring & Mussey; 1935	7-9
SMALL, S. A.	<i>Boy's Book of the Earth</i>	E. P. Dutton & Co., Inc.; 1924	7-8

## Group V. Greece

1. Plan an itinerary for class.
2. Which cities shall we visit? Why?
3. What are the principal industries? principal crops?
4. Report to the class any interesting customs about which you read.
5. Describe clothing and types of shelter (past and present).
6. Tell the class an old Greek myth.

### REFERENCES

			READING GRADE LEVEL
BALDWIN, J.	<i>Old Greek Stories</i>	American Book Company; 1923	4
CARPENTER, F. G.	<i>Europe</i> (pages 400-412)	American Book Company; 1931	5
CHURCH, A. J.	<i>Helmet and Spear</i>	Seeley, Service & Co., Ltd.; 1900	7
CLARK, M. G., GORDY, W. F.	<i>Early Story of Man-kind</i>	Charles Scribner's Sons; 1929	4



# CLASSROOM PROVISION

			READING GRADE LEVEL
DEMETRIUS, G.	<i>When I Was a Boy in Greece</i>	Lothrop, Lee & Shepard Company; 1913	7
FAIRGRIEVE, J., YOUNG, E.	<i>Homes Far Away</i> (pages 105-117)	D. Appleton-Century Company, Inc.; 1927	3
HARDING, C. H., HARDING, S. B.	<i>Stories of Greek Gods, Heroes, and Men</i>	Scott, Foresman & Co.; 1897	3
MCGREGOR, M.	<i>Story of Greece Told to Boys and Girls</i>	Frederick A. Stokes Company; 1914	6
MILLS, D.	<i>Book of the Ancient Greeks</i>	G. P. Putnam's Sons; 1925	7
SNEDEKER, C. D.	<i>Theras and His Town</i>	Doubleday, Doran & Co., Inc.; 1924	5

## Group VI. France

1. Plan an itinerary for the class.
2. Which cities shall we visit? Why?
3. What are the industries for which France is famous?
4. What special kinds of food do the French like?
5. How do the French schools compare with ours?
6. Describe the clothing and types of homes in France (present and long ago).
7. Tell the class about a few important leaders in France (past and present).

## REFERENCES

			READING GRADE LEVEL
BEURET, G.	<i>When I Was a Girl in France</i>	Lothrop, Lee & Shepard Company; 1925	7
CARPENTER, F. G.	<i>Europe</i> (pages 95-137)	American Book Company; 1931	5
CREW, H. C.	<i>Laughing Lad</i>	D. Appleton-Century Company, Inc.; 1931	6
CHAMOUD, S.	<i>Picture Tales from the French</i>	Frederick A. Stokes Company; 1933	3
CREIGHTON, L.	<i>Heroes of French History</i>	Longmans, Green & Co.; 1925	7

## BASIC READING ABILITIES

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			READING GRADE LEVEL
HILLYER, V. M.	<i>Child's Geography of the World</i> (pages 186-199)	D. Appleton-Century Company, Inc.; 1929	4
PORTER, L. S.	<i>Genevieve</i>	E. P. Dutton & Co., Inc.; 1914	5
TAPPAN, E. M.	<i>Hero Stories of France</i>	Houghton Mifflin Company, 1920	6

### Group VII. Spain

1. Plan an itinerary for the class.
2. What interesting places shall we visit?
3. Find out what you can about bullfights in Spain.
4. Describe clothing and types of homes.
5. Are there any particularly interesting customs in Spain?
6. What are the most important industries in Spain?

### REFERENCES

			READING GRADE LEVEL
BRANN, E.	<i>Lupe Goes to School</i>	The Macmillan Company; 1930	6
BATES, K. L.	<i>In Sunny Spain with Pilarica and Rafael</i>	E. P. Dutton & Co., Inc.; 1913	7
CARPENTER, F. G.	<i>Europe</i> (pages 457-476)	American Book Company; 1931	5
EELLS, E. S.	<i>Tales of Enchantment from Spain</i>	Harcourt, Brace & Co., Inc.; 1920	5
HILLYER, V. M.	<i>Child's Geography of the World</i> (pages 207-218)	D. Appleton-Century Company, Inc.; 1929	4
PERKINS, L. F.	<i>Spanish Twins</i>	Houghton Mifflin Company; 1934	5
WELLS, R.	<i>Coco the Goat</i>	Doubleday, Doran & Co., Inc.; 1929	3
BOGGS, R. S., DAVIS, M. C.	<i>Three Golden Oranges</i>	Longmans, Green & Co.; 1937	4

## Group VIII. Transportation

1. Find as many illustrations as possible of the different kinds of transportation used in Mediterranean countries now and long ago.

2. Be able to tell the class how long ago the different types of transportation were used.

3. Compare the means of transportation in these countries with those used in the United States at the same period.

## REFERENCES

*World Book Encyclopedia.*

*Compton's Pictured Encyclopedia.*

*Book of Knowledge.*

			READING GRADE LEVEL
CARPENTER, F.	<i>Our Neighbors Near and Far</i>	American Book Company; 1933	5
DUKELOW, J. H., WEBSTER, H. H.	<i>The Ship Book</i>	Houghton Mifflin Company; 1931	4

## RELATED ACTIVITIES

### *Construction*

1. Construct model of liner.
2. Miniature vessels of various kinds of transportation (past and present).
3. Time-line of ships.
4. Map showing steamship route.
5. Ship book with original stories and illustrations.
6. Scrapbook.

### *Collecting*

1. Pictures of different types of vessels.
2. Steamship folders.
3. Lists of stories and books.
4. Interesting things made in Mediterranean countries.

### *Things to do*

1. Dress dolls showing costumes of Mediterranean lands.
2. Write paragraphs and poems for scrapbooks.
3. Write a one-act play.
4. Plan an assembly program.

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## CHAPTER 5

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### MOTIVATION

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**N**OTHING is more important in an instructional program in reading than that every lesson — every exercise — be so motivated that interest and attention will be maintained at a high level. A child must have a desire to read and an interest in increasing his reading ability, as a means of satisfying various practical and emotional needs. Unless he is able to keep his attention on the reading, much of the teaching is wasted. Rate of growth, development and retention of skills, and amount of voluntary reading depend largely upon a desire for reading. This is particularly true in the case of children who have encountered failure in the course of their school careers because instruction was improperly adjusted to their learning needs. Inattention, misbehavior, and laziness result from assignments which to the child seem purposeless.

#### BASIC PROBLEMS OF MOTIVATION IN READING

Education should provide the learner with voluntary habits of growth in effective living. Any type of motivation, whether in reading or any other school activity, should be judged by its success in achieving this goal. Certain kinds of motivation may increase child effort at the expense of interest. In this class belong coercive types of motivation, such as threats of restrictions or punishments for inattention or low effort. Other types of motivation, such as rewards and contests, tend to arouse more interest in winning games than in accomplishing the real task at hand. Such motivation makes the child dependent upon the

teacher or the class for initiating his work. A desire to read independently is not inculcated by such methods of motivating school work; and all motivation in the teaching of reading should have as its fundamental purpose a systematic increase in the child's desire to read.

#### BASES OF INATTENTION

If a child is inattentive in class, teachers tend to blame the child's parents or various psychological factors which are beyond their control. A medical examination will sometimes reveal conditions which produce quick fatigue, resulting in loss of attention; but usually inattention is due to faulty lesson planning. When children lose track of their work and slip into daydreaming, slovenly postures, aimless play, or misbehavior, they are merely indicating that the day's work is inadequately motivated. Before seeking any other cause of inattention, the teacher should appraise her lesson plans. It should be remembered that usually attention parallels real interest. At certain times a child may evidence extreme fatigue or engage in discourteous behavior; but shortly after he may display fine attention, co-operation, and regard for others simply because a new task is interesting and challenging.

Often parents appear to have allowed their children to acquire undesirable habits; yet the teacher need not wait for some miraculous change in the child's home life before undertaking plans to overcome inattention and aversion to work. Occasionally emotional conflicts and poor home conditions may account for inattention. However, well-motivated learning has a salutary effect on emotional disturbances. The expert teacher knows that removal of confusions in reading results in progress and that interesting and purposeful activities relieve emotional blocking and remedy bad habits. When home conditions are unsatisfactory and the child's emotional life is empty, a well-

motivated reading program may become an oasis in an otherwise barren emotional desert.

When a child with little apparent interest in learning, or with behavior difficulties, is sent to a psychologist or psychiatrist for intensive study, the usual recommendation is that the child be given security, a sense of achievement, and a well-balanced program of interesting activities. This describes well the outcomes of classroom activities planned by an intelligent teacher.

### ADJUSTING THE WORK TO THE PUPILS

In any successful program of motivation, the materials of instruction must be adjusted to the child's ability and learning rate. The child should not be asked to carry too difficult a load. He cannot maintain excellent work habits when, day after day, his best efforts are rewarded by confusion and failure. Even the most carefully motivated program will be ineffective when adjustment is incorrect. Many suggestions have been made in Chapter 4 for adjusting classroom instruction to differences in reading ability. A common need is for easy books with an older interest level. At the end of this chapter there is a list of books which have been found to satisfy this need.

The child should understand the relations of both the specific exercises and the general program to his particular reading needs. This implies that he be told about his difficulties and faulty habits and also the plans for remedying them. A child can usually be safely informed of his weaknesses if at the same time he believes that the lesson plans will help him to overcome them. Then he must be shown that each exercise is designed to overcome his difficulties and increase his power. When his interest is enlisted in the corrective program, he no longer tries to conceal his difficulties. No longer does his chief classroom activity consist of avoiding a display of ignorance. He



knows that confusion and lack of understanding should be reported to the teacher and that no penalty results from revealing his difficulties. As a result the classroom situation is more favorable to learning. Even a child with a mental age of six years can understand that certain exercises are intended to remedy specific difficulties.

The results of the informal analysis outlined in Chapter 2 may be shown to each group of children who are to receive similar instruction. At the same time they must be shown lesson plans that will increase their abilities and overcome their faulty habits. Suggestions for making these plans will be found in various chapters of this book.

#### PURPOSIVE MOTIVATION IN READING

The highest type of motivation is reading for some specific purpose which appeals to the child as important. The best assignments are those which call into play internal drives and satisfactions, or "instincts," as they were called by William James. Some of these drives are the desire for prominence or social approval, the desire for praise from an admired person, interest in planning and other inventive activity, carrying out plans through various types of activity, expressing altruism and sympathy by helping less fortunate children, investigating to satisfy curiosity, and imitation of admired people or products. Many types of assignments utilize these internal drives.

#### SPECIAL REPORTS FOR SCHOOL SUBJECTS

The content subjects such as science, safety education, history, geography, health, music, art, nature study, etc., provide many opportunities for special reports by individuals or groups. Assignments of this kind may be an integral part of the course of study and should be made far enough in advance to allow adequate time for preparation.

## BASIC READING ABILITIES

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They are particularly suitable for the superior readers. The reports should be made interesting by exhibits, pictures, experiments, maps, drawings, and other varied activity. The child or group of children making the reports to the class should preserve an air of secrecy in their study and planning so that "previews" will not dull interest in the final reports.

### SCHOOL EVENTS AND CLASS ACTIVITIES

Various events in which a class is to participate, such as visits to museums, factories, farms, or the showing of informational motion pictures, lantern slides, or exhibits, provide opportunities for purposeful reading which may be followed by reports. The reading and reports should come *before* the events if the highest motivation is to be derived from them. When the event arrives the class will be sufficiently informed to ask pertinent questions, to notice specific elements in procedure or product, and to appreciate more fully what they see. The reading of the entire class may center around these future activities if a sufficient amount of reading material is available on the various levels.

Many class projects utilize the children's interest in planning and carrying out plans. A great deal of reading may be motivated by planning an assembly program, an exhibit to be placed in a vacant store window, an evening's entertainment for parents, a class newspaper, or a magazine to illustrate the high points of the year's work. Other class projects may utilize sympathy and altruism as motivating elements in reading, as when illustrated books are planned, toys are made, or suitable stories are collected for children in hospitals or poor communities.

### CHALLENGE TO CURIOSITY

Teachers employ many types of challenges to curiosity as a method of motivating reading. One of the usual

methods is to read the beginning of an interesting story and ask the children to guess how the action progresses and how the story ends. Calling attention to some curious fact, such as a bird returning to the same nest a second year, may stimulate curiosity in regard to the migration and nesting habits of birds. This type of approach is particularly suitable for motivating reading dealing with collections of articles, described in Chapter 4. The purpose is far more important than the topic in making reading assignments. If the purpose is sufficiently stimulating, the child will read on almost any topic which serves that purpose.

### PUPIL RESPONSIBILITY

There should be individual or small-group responsibility for various phases of each activity, if the motivation is to have full value. This will make every pupil's work important. If the class as a whole works on similar things, the resulting competition will discourage many children and dull the sense of responsibility in others. Each should have his own work to do.

### USE OF PUPILS' ESTABLISHED INTERESTS

#### DIFFICULTIES INVOLVED

It is often suggested that the teacher find the pupils' interests and connect the reading to them. There are several reasons why this advice is rather fruitless. Courses of study in most subjects are usually predetermined, so that there is no opportunity for free choice of interest centers. Even if free choice were available, it is difficult to discover genuine interests as differentiated from whims of the moment. Many apparent interests disappear if the reading material is difficult or dull, even though it centers about

the presumed interest. Children in the same room may express quite different interests, resulting in confusion and difficult classroom management. Furthermore, since expressed interests may be extremely narrow or even undesirable, basing instruction on expressed interests may close the doors to wider education which the child needs.

### SUITABLE INTEREST CENTERS

However, it is often possible to utilize for reading motivation events of wide interest as well as seasonal activities. A state or world's fair, an antarctic expedition, a disaster such as a flood or an earthquake, the visit of the head of another nation, or any suitable event sufficiently dramatized in the news may serve to initiate a reading unit. The activities of the Christmas season, a community festival, or any of the various special "weeks," such as Fire Prevention Week or Education Week, may stimulate an accompanying reading program. The program of individual leisure reading or individual tutoring is especially adaptable to established pupil interests.

### DISCOVERING PUPILS' INTERESTS

The interest inventory below may serve as a basis for conversation with the child to discover his interests. It is read slowly to the child, and interspersed with comments such as "Do you like any of these?" or "Have you ever tried any of these?" or other remarks that seem suitable. If an interest is manifested, it is well to discover whether it is truly an interest or merely a whim. This may be done by finding out by questions whether the child has pursued any activities connected with the presumed interest. If many activities have been carried on over a long period of time, it is safe to assume that the interest will not disappear even if the reading is difficult.

### INTEREST INVENTORY

1. Hunting, fishing, camping, sailing, canoeing, hiking, scouting
2. Horses, cows, sheep, pigs, chickens, dogs, cats, rabbits
3. Flowers, gardens, trees, wild flowers, birds, stars, weather
4. Automobiles, airplanes, radio, wireless, railroads, bridges, construction
5. Carpentry, electricity, chemistry, photography, printing, signaling
6. Drawing, painting, carving, modeling, basketry, metal-work
7. Music, orchestra, piano, violin, dancing, dramatics, debating, speaking
8. Reading, poetry, stories, plays, mythology, Bible, biography, adventure
9. Collecting, stamps, stones, shells, bugs, flowers
10. Cooking, candy making, fancy work, sewing, weaving, interior decoration
11. Card games, puzzles, checkers, chess, indoor games
12. Football, baseball, basketball, hockey, boxing, wrestling, track
13. Swimming, skating, riding, tennis, golf, archery, acrobatics, bowling
14. History, geography, science, arithmetic, languages
15. What clubs do you belong to?
16. What do you intend to do for a living?

### IMPROVING MOTIVATION THROUGH VARIETY

If interest in content is difficult to maintain, inattention may be overcome by increasing the variety of reading assignments. Novel settings improve attention and intensify the pupil's attack. This is true both for comprehension reading and for drill exercises.

## *BASIC READING ABILITIES*

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### PHYSICAL VARIATION

Even simple changes tend to relieve monotony. Rearrangement of room furniture for reading groups, a reading corner, or a library "project" will aid motivation. Any change in an established order for reading will usually be welcome.

### VARIETY IN DRILL MATERIAL

In using drill material, constant variation is desirable. While the amount and kind of drill depend on the child's needs and abilities, variety of presentation is limited only by the teacher's ingenuity. Many simple devices add interest to drill materials, such as variety in sizes, shapes, and colors of paper for lists; different devices for quick exposure in word-recognition drill; "games" and "races" with time-saving and simple scoring devices and with ease of adjustment to the most-needed types of drill; "seatwork materials" or any humorous or novel situations which can be devised. Many suggestions for securing variety in drill material will be found in Chapters 6 to 10.

### VARIETY IN READING MATERIAL

An infinite variety of novel presentations is possible in the material presented for reading. Many objects can be constructed by the child from written directions. Field trips may be recorded in typewritten reports. Needed information may be obtained from small books, such as tree and bird guides, and from reference books such as encyclopedias and atlases. Books with many illustrations and with unusual bindings may be consulted. A variety of poems may be read, including those that are humorous, sad, martial, romantic, or nonsensical. A place can also be found for newspapers, magazines, and catalogues.

When variety of content is sought, endless possibilities



are available. Any material, from fiction to science, may be drawn upon. Many libraries issue lists of children's books. Sometimes it is helpful for the child to visit the library in a leisurely way and sample a variety of books.

### MECHANICAL DEVICES AND AIDS

The use of such devices as the Metron-O-Scope, tachistoscope, and motion-picture and lantern-slide projectors will help to vary the classroom instruction. A Dictaphone or other device for making phonograph records may be used in many ways in oral-reading instruction.

### MOTIVATION THROUGH KNOWLEDGE OF PROGRESS

#### MEASURING PROGRESS IN DRILL WORK

In mastering the mechanics of reading the strongest motive is the desire for progress. Lack of visible progress is discouraging both for pupil and teacher. In so diversified an activity as reading, goals are not well marked and daily progress is so slight as to be hardly noticeable. Devices which enable the child to see his progress are indispensable. The assurance that "You are doing much better" is not enough. Praise is meaningless without some concrete basis. The teacher herself can rarely see the progress; consequently her praise of the child's development sometimes lacks sincerity.

Definite objective measures of progress should be attempted. A list may be kept of words learned to the point of quick recognition; from time to time these words may be reviewed and a record made of the errors and of the time required to complete the list. When word meanings are being acquired, a pocket dictionary can be made by the child, to contain his personal vocabulary. The words in this dictionary should be counted and the total plotted each

week. When new drill lists are presented to increase word mastery or to speed up word analysis, the time on the first performance and on succeeding ones should be recorded. The amount of aid required for an accurate performance should also be measured.

Improvement in reading is more readily understood by the child when expressed on a bar graph. The child's gain is then more evident, and the teacher needs to explain only its significance. Bar graphs are usually preferable to line graphs, for achievement appears more important when indicated by a whole new bar than when it is merely an extension of a line to a new point.

### DEVELOPMENT OF A SENSE OF PROGRESS

A more important means of showing progress is arrangement of drill material so that the child recognizes his own improvement. If drill lists contain both familiar words and new ones, the child senses his progress. Success with familiar words compensates for difficulty with newer ones. Drill should be so arranged that the child has adequate practice on new words during the first part of the lesson. Then the drill will seem easier. A child can obtain this impression of success in comprehending phrases by reading the story containing them, both before and after the practice period. The difference is usually so marked that the child radiates his pleasure at his increased skill. This feeling of success is worth more to the child than the most enthusiastic praise.

### MEASURING PROGRESS IN COMPREHENSION

Progress in reading comprehension is more difficult to show than is improvement in mechanics, especially for short intervals of learning. Improvement in comprehension may be shown by saving the child's written work in

the study-type exercises described in Chapter 10 and comparing early achievement with later achievement in each of the abilities. The use of alternative forms of some of the standardized reading tests that cover this phase of reading ability will reveal gains for longer intervals of learning.

### MOTIVATION AND IDEALS OF IMPROVEMENT

It is decidedly difficult to improve accomplishment merely through discussion of ideals of workmanship, persistence, etc. Permanent gain from this approach is small unless other motivation techniques are also employed. However, the child's aid must be enlisted in improving certain conditions, such as slovenly posture, excessive talkativeness, wasting time, and similar bad habits which contribute to failure in reading by making sustained attention difficult. Personal habits interfering with performance should be met directly. The child should understand that such habits arise naturally, often from previous reading failure. If there are a large number of habits needing correction, they should be eliminated one at a time, and the child should know the first one chosen for elimination. He should understand that only by his efforts can such corrections become permanent.

The essential part of a corrective program is definite activities. Advice such as "Work harder," or "Do better," or "Pay better attention," is too general to be of value. When a habit has been chosen for elimination, no lapses should be allowed. A simple gesture, a touch on the arm, or some other unspoken signal of the teacher should be the sign to correct the condition.

One should not expect reorganization of a child's work habits to follow a single talk. Old habits are not overcome by a single discussion. Yet, if the child develops the self-control necessary to correct a slumped posture or straighten a carelessly held book, something important has

been accomplished. A talk with the child may result in his observing and correcting his undesirable tendencies, but usually a follow-up program is required.

### MOTIVATION THROUGH REWARDS AND PUNISHMENTS

Rewards are seldom used in dealing with children with difficulties in reading. Usually rewards create a negative attitude toward reading, diverting attention from higher purposes in reading. Unless the reward is immediately forthcoming, the child may not read at all. If too small or too distant, the reward may not provide motivation. If large or frequent, it may distract attention and finally become mandatory.

Effusive praise should be avoided. Unless the praise is merited, it has little effect. If the child is aware of success, praise is unnecessary. When the work is well planned, the attack vigorous, and the lesson filled with interest, little praise is needed.

There is no place for punishment in reading instruction. At times a child gives the appearance of willful inattention. If change of methods does not provide a remedy, the child should be quickly but quietly removed from the group and a new plan made. Instruction without attention results in confirming the habit of inattention. No learner voluntarily interrupts a pleasant situation without a strong reason. Difficulties which seem to demand punishment can usually be traced to incorrect lesson planning. More carefully planned work and less talk about the child's poor achievement is a wholesome procedure.

## REFERENCES

Books for children may be found in the annual catalogues of publishers of books for children. Some of the standard bibliographies which aid in location of books on various grade levels and interest centers are the following:

- Children's Catalog.* The H. W. Wilson Company, New York; 1936.  
*Five Years of Children's Books*, compiled by Bertha E. Mahony and Elinor Whitney. Doubleday, Doran & Co., Inc., New York; 1936.  
*Graded List of Books for Children.* American Library Association, Chicago; 1936.  
*Horn Book Magazine*, Boston. Reviews current children's books.  
*Realms of Gold in Children's Books*, compiled by Bertha E. Mahony and Elinor Whitney. Doubleday, Doran & Co., Inc., New York; 1929.

Evidence of the variety of ways in which different phases of reading may be taught is found in an inexpensive booklet, *Reading Aids through the Grades*, by Russell, Karp, and Kelley, published by the Bureau of Publications, Teachers College, Columbia University, 1938. Much of this material parallels closely the devices used for several years in the Boston University Educational Clinic. Many workbooks present a variety of exercises for improving specific reading abilities.

Varied activities for groups and for individual work in the several elementary school subjects are illustrated and discussed in the following books:

- CROXTON, W. C. *Science in the Elementary School.* McGraw-Hill Book Company, Inc., New York; 1937.  
 GUSTIN, M., and HAYES, M. L. *Activities in the Public School.* University of North Carolina Press, Chapel Hill; 1939.  
 HOCKETT, J. A., and JACOBSEN, E. W. *Modern Practices in the Elementary School.* Ginn & Co., Boston; 1938.  
 HORRAIL, A. H., and Others. *Let's Go to School.* McGraw-Hill Book Company, Inc., New York; 1938.  
 LANE, R. H., and Others. *The Progressive Elementary School.* Houghton Mifflin Company, Boston; 1938.  
 THRALLS, Z. A., and REEDER, E. H. *Geography in the Elementary School.* Rand McNally & Co., Chicago; 1932.  
 YOAKAM, G. A. *The Improvement of the Assignment.* The Macmillan Company, New York; 1932.

## BASIC READING ABILITIES

### SELECTED LIST OF BOOKS FOR REMEDIAL READING<sup>1</sup>

The following books are suggested for use in remedial or special classes to meet the needs of children who require material in which the interest level is several grades higher than the vocabulary level. All the books are printed in clear type and are well illustrated. They cover various fields of interest of children from grades three through eight, and will supply the child who is not up to his regular grade vocabulary with reading material that he will like because it is of interest to him.

	VOCAB- ULARY LEVEL	INTEREST LEVEL
PITKIN, R. S. <i>Maple Sugar Time</i> . Stephen Daye Press; 1934. \$1.00.	1-2	3-4
WADDELL, JOHN F.; NEMES, LOIS G.; and BUSH, MAY-BELL G. <i>Helpers</i> . The Macmillan Company; 1937. 96 cents.	1-2	4-6
HANNA, PAUL R., and ANDERSON, GENEVIEVE. <i>Everyday Life Stories</i> (Primer through Book III). Scott, Foresman & Co.; 1935-1938. 92 cents.	1-3	3-7
BEAUCHAMP, W. L.; CRAMPTON, GERTRUDE; and GRAY, W. S. <i>Science Stories</i> (Book I). Scott, Foresman & Co.; 1933. 68 cents.	2	4
SMITH, JEANETTE. <i>Summer by the Sea</i> . American Book Company; 1933. 52 cents.	2	5
HUNTINGTON, HARRIET E. <i>Let's Go Outdoors</i> . Doubleday, Doran & Co.; 1939. \$2.00.	2	5-7
BRONSON, W. S. <i>Pollwiggles Progress</i> . The Macmillan Company; 1932. \$2.00.	2-3	5
HAHN, J. L. <i>Child Development Readers</i> . Houghton Mifflin Company; 1935-1936. 60 cents and 64 cents.	2-3	5-6-7
PATCH, E. M., and HOWE, H. E. <i>Nature and Science Readers</i> (Book III). The Macmillan Company; 1933. 84 cents.	2-3	5
BRUN, ESTHER. <i>Patrick Was His Name</i> . The Macmillan Company; 1938. \$1.00.	2-3	5-6
BAILEY, C. S. <i>When Grandfather Was a Boy</i> . Ginn & Co.; 1928. 72 cents.	3	5

<sup>1</sup> Prepared by Helen Blair Sullivan, Associate Director of the Educational Clinic, Boston University.



	VOCAB- ULARY LEVEL	INTEREST LEVEL
BASS, M. F. <i>Stories of Pioneer Life</i> . D. C. Heath & Co.; 1928. 84 cents.	3	5-6
BLAISDELL, A. F., and BALL, F. K. <i>Log Cabin Days</i> . Little, Brown & Co.; 1921. 75 cents.	3	5-6
BRANDEIS, DORIS. <i>Judy's Ocean Voyage</i> . American Book Company; 1932. 60 cents.	3	5
BRANDEIS, MADELINE. <i>Little Swiss Woodcarver</i> . A. Flanagan Company; 1929. 68 cents.	3	5-7
BURNS, A. J. <i>Stories of Shepherd Life</i> . American Book Company; 1934. 52 cents.	3	5
CAMPBELL, H. M. L. <i>Story of Wah Sing, Our Little Chinese Friend</i> . David McKay Company; 1929. 65 cents.	3	5-6
CHANCO, L. M. <i>Little Folks of Many Lands</i> . Ginn & Co.; 1904. 64 cents.	3	4-5
CURTIS, N. C. <i>Boats</i> . Rand McNally & Co.; 1927. 80 cents.	3	4-5
LACEY, I. B. <i>Light Now and Then</i> . The Macmillan Company; 1930. 88 cents.	3	5
LENT, H. B. <i>Clear Track Ahead</i> . The Macmillan Company; 1932. \$2.00.	3	6
OLCOTT, VIRGINIA. <i>Anton and Trini</i> . Silver, Burdett & Co.; 1932. 76 cents.	3	6
———. <i>Karl and Gretel</i> . Silver, Burdett & Co.; 1932. 76 cents.	3	6
PETERSHAM, MAUD and MISKA. <i>Story Book of Foods from the Fields; Story Book of Wheels, Ships, Trains, and Aircraft</i> . John C. Winston Company; 1936. \$2.50 each.	3	5-6
PRYOR, W. C. and H. S. <i>The Steel Book</i> . Harcourt, Brace & Co., Inc.; 1935. \$1.00.	3	6
PUMPHREY, M. B. <i>Pilgrim Stories</i> . Rand McNally & Co.; 1926. 75 cents.	3	5-6
SHELTER, S. C. and EARLY. <i>Candlelight Stories</i> . Rand McNally & Co.; 1922. 72 cents.	3	4-7
SMITH, J. R. <i>Home Folks</i> . John C. Winston Company; 1930. \$1.16.	3	6-8
STEPHENSON, M. B. <i>Wheel, Sail, and Wing</i> . Follett Publishing Company; 1930. 50 cents.	3	5-7
TOUSEY, SANFORD. <i>Cowboy Tommy</i> . Doubleday, Doran & Co., Inc.; 1932. \$1.50.	3	5-6
ATWATER, RICHARD and FLORENCE. <i>Mr. Popper's Penguins</i> . Little, Brown & Co.; 1939. \$1.50.	3	5-6

# BASIC READING ABILITIES

	VOCAB- ULARY LEVEL	INTEREST LEVEL
JOHNSON, MARGARET S. and HELEN L. <i>Barney of the North</i> . Harcourt, Brace & Co., Inc.; 1939. \$1.75.	3	5-8
HOWARD, ETHEL K. <i>How We Get Our Food</i> . Harcourt, Brace & Co., Inc.; 1939. 88 cents.	3	5-8
PATCH, E. M., and HOWE, H. E. <i>Nature and Science Readers (Book IV): Through Four Seasons</i> . The Macmillan Company; 1933. 88 cents.	3-4	6
PEET, CREIGHTON. <i>Dude Ranch</i> . Albert Whitman & Co.; 1939. \$2.00.	3-4	5-8
CRAIG, G. S., and BURKE, AGNES. <i>Pathways in Science</i> . Ginn & Co.; 1933. 68 cents.	3-5	5-7
BRANDEIS, MADELINE. <i>Little Rose of the Mesa</i> . Grosset & Dunlap, Inc.; 1935. 50 cents.	4	5-7
BURCH, GLADYS, and WOLCOTT, JOHN. <i>Child's Book of Famous Composers</i> . A. S. Barnes & Co.; 1939. \$1.50.	4	5-8
BUSH, M. G., and WADDELL, J. <i>How We Have Conquered Distance</i> . The Macmillan Company; 1932. 96 cents.	4	7-8
CHRISTESON, F. M. and H. M. <i>Wild Animal Actors</i> . Albert Whitman & Co.; 1935. \$1.00.	4	5-8
DES CHESNEZ, LADY. <i>Lady Green Satin and Her Maid Rosette</i> . The Macmillan Company; 1923. \$1.00.	4	6
ENGLEMAN, F. E., and SALMON, JULIA. <i>Airways</i> . D. C. Heath & Co.; 1931. 80 cents.	4	7-8
DUKELOW, J. H., and WEBSTER, H. H. <i>The Ship Book</i> . Houghton Mifflin Company; 1931. \$1.12.	4	7-8
FLAHERTY, J. <i>Fire Fighters!</i> Doubleday, Doran & Co., Inc.; 1933. \$1.50.	4	4-8
FOLGER, DORIS, and NICOL, NINA. <i>Rusty Pete of the Lazy A-B</i> . The Macmillan Company; 1929. \$1.75.	4	5-7
HOWARD, A. W. <i>The Princess Runs Away</i> . The Macmillan Company; 1934. \$1.50.	4	4-7
MURPHY, MABEL. <i>When Washington Was Young</i> . Albert Whitman & Co.; 1935. \$1.00.	4	6-8
LENT, H. B. <i>Full Steam Ahead!</i> The Macmillan Company; 1933. \$2.00.	4	4-7
OLCOTT, VIRGINIA. <i>Klaas and Jansje</i> . Silver, Burdett & Co.; 1933. 76 cents.	4	6-7
PRYOR, W. C. and H. S. <i>The Glass Book</i> . Harcourt, Brace & Co., Inc.; 1935. \$1.00.	4	5-7
SPERRY, ARMSTRONG. <i>All Sails Set</i> . John C. Winston Company; 1935. \$2.00.	4	7-8

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## CHAPTER 6

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### ORAL READING

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**O**RAL reading is a major consideration in the primary grades, and it is of special importance at any level for children with reading difficulties. This is because faulty habits, difficulties, and confusions become immediately apparent in oral reading in a way to reveal reasons for a child's lack of progress and difficulties in comprehension.

Oral reading has, in addition, many other important values for reading instruction. It motivates reading, as evidenced by the desire of primary-grade children to read aloud to the group. With a true audience situation, it induces exchange of ideas and a feeling of group unity. It is essential to instruction based on pupil reports and discussions of library materials, as in the content subjects. When carefully directed, it widens speaking vocabulary and tends to improve speech and conversation. Full enjoyment of poetry and drama is impossible without effective oral reading. It has important uses in both vocational and leisure-time activities. Parents with imagination and initiative find that oral reading serves a variety of useful purposes in their family life.

An obvious disadvantage of oral reading for classroom use is that only one pupil can perform at a time. This drawback can be offset somewhat by use of small groups in which each child may read more often. Another disadvantage of oral reading is its tendency to reduce silent reading to the slow oral-reading rate and to encourage lip movements and word pronunciation in silent reading, which later require remedial attention.

IMPORTANCE OF AUDIENCE SITUATION

In every phase of oral reading the audience situation must be maintained. Ordinarily two conditions prevent attainment of the audience situation: (1) Revealing the plot of the story during the preparatory work and (2) allowing children to look at their books while others read orally.

Children must always have a reason for listening during oral reading. If the plot has been revealed, the reason for listening has been lost. In this chapter are outlined various types of oral assignments to provide reasons for listening, such as preliminary study without disclosing the plot of the story or the development of a new listening situation through the study assignment.

The second factor which disturbs the audience situation — looking at the book as others read orally — has little justification at any level of reading instruction. Above the second grade the silent-reading rate is usually faster than the rate of oral reading. Therefore, if children are required to “keep the place,” they are being taught faulty silent-reading habits, such as slow reading, lip movement, and silent pronunciation, as well as inattention to content. In grades one and two there is little reason for allowing children to look at the book while others read. Slow learners usually cannot follow the place in a book or give close attention to the individual words while the more advanced pupils read; the more advanced pupils are required to use faulty silent-reading habits if they follow the slower ones in their reading.

Word analysis during the oral-reading lesson often spoils the pleasure of the group in audience reading. A child should be helped immediately on mispronounced or unknown words. Comments of teacher and pupils during audience reading must be directed only toward the content of the story. Difficult words may be noted for future study, if they are of sufficient importance to be included

in the child's sight vocabulary. Any child will have adequate opportunity to apply his word-analysis ability in independent reading and study; at that time he is not emotionally confused by his display of difficulty and is likely to use his word-analysis ability to better advantage.

Interest cannot be expected in oral reading when the outcome of the story is known in advance, or when the activity serves only to "catch" children on mispronounced or unknown words, to answer trivial questions, or simply to fill the reading period. Each oral-reading lesson should be purposive, as to both motivation and emphasis on reading skills.

### PLANNING AN ORAL-READING PROGRAM

Carefully planned lessons based upon specific needs are essential to the success of oral-reading instruction. Attention must be given to skills specifically basic to oral reading and also to speech, such as volume and flexibility of voice, enunciation and pronunciation, expression, and breath control. In addition, the oral-reading lessons should be utilized for detection of certain faulty habits in silent reading, such as word-recognition difficulties, inadequate or incorrect phrasing, inattention to punctuation, omission or addition of words.

### SMALL-GROUP INSTRUCTION

Oral reading should usually be done in small groups, as described in Chapter 4. This plan permits greater practice for each child. Before starting small-group instruction the teacher should be well acquainted with methods of administration, methods of selection and adjustment of materials to pupil needs, and the types of organization of classroom work. To obtain uniformity of interest in the entire class, lesson plans need careful development, types of in-

struction must be suited to the group, and there must be adequate provision for checking comprehension during and after reading.

### NATURE OF LESSON PLANS

The lesson plans for oral reading will, of course, depend upon the type and purpose of the assignment and the needs of the pupils. For example, when the entire class takes part in reading a story, the following typical steps are gone through:

- a. The story is scanned by the teacher for words which may give difficulty in either meaning or recognition.
- b. Exercises are given on the recognition of these words as outlined in Chapter 8.
- c. Exercises may also be needed in reading these words in phrases and sentences.
- d. Provision is made for motivating the lesson. Ordinarily this consists of a brief statement showing the relation of the lesson to general classroom activities, the nature of the plot, information to be discovered, or directions for listening with a specific purpose as the story is read.
- e. It is usually well to indicate the amount of material each child is to read so that each pupil will have a fair amount of practice.
- f. An exercise for checking meaning and comprehension is given. If the story has been well motivated and the audience situation maintained, often no need arises for comprehension checks after the oral reading.
- g. If a group finishes the reading before the scheduled time, provision is made for other activities, such as review lessons in word meaning or word recognition, drills for various types of errors, re-reading for expression, or games that aid reading.



## MAJOR TYPES OF ASSIGNMENTS

Four general types of assignments are suitable for oral reading: (1) those requiring true audience reading; (2) those requiring intensive study of selections for various purposes; (3) those designed to improve phrase reading; and (4) those designed to improve voice and oral expression. These will be considered in the following sections of this chapter.

## METHODS FOR IMPROVING AUDIENCE READING

It is important in audience reading that the child who is to read aloud study the selection before presenting it. Of course, the members of the audience should not have read the story. In the assignments suggested below, provision is made for the development of smooth oral reading, for the preservation of the novelty element, and for giving the audience a reason for listening.

## SIGHT READING

In this method children read the new story without previous preparation except for word, phrase, and sentence drills. Since sight reading does not permit previous silent study of the selection, special emphasis must be placed upon phrase and sentence exercises based on the story. Thus pupils should encounter no new words and should be able to read reasonably smoothly without previous preparation. The stories should not be known to the children prior to class reading. If this method is used in connection with basal readers, books should not be given to the children except during the reading period. As teachers know, books that are available at the beginning of a year are often read completely by some children during the first few weeks. If these books are used for oral-reading lessons, there is no compelling reason for certain children to give attention.

### THE DIVIDED-STORY METHOD

A story for reading by a group of five or six children is cut into twelve to eighteen parts and pasted on cards for easy handling. The story may be cut from a discarded book or magazine. Two copies of the story will be needed, since part of it may be on the back of a section to be glued to a card. The cards should be numbered, corresponding to the order of the parts in the story.

Each child is given one or two cards to prepare for reading orally. When every member of the group has studied his cards and is sure he can read them without hesitation and with good expression, the cards are read orally in turn. In this plan each child is held accountable for only the words in his selection; if desired, the difficult words and phrases in the whole story may be studied by the entire group prior to the reading.

### PUPIL PREPARATION OF SHORT SELECTIONS

This method is particularly valuable in upper grades where the children have good word mastery. Suitable materials for this type of reading are newspaper clippings, short biographical selections, notes from encyclopedias, short selections from books of essays, and original compositions, poems, and extracts emphasizing special topics. Teachers themselves may make collections of short units related to such topics as holidays, famous people, transportation, and arts.

The reading lesson centers around a single topic, with easy and difficult selections suitably assigned. After the pupils have studied their selections, each reads orally to the class. If an article is too long to be read orally, the pupil may write a summary or select significant paragraphs for class presentation.

## READING OF DRAMATIZED MATERIAL

In this type of oral reading each pupil prepares to read the lines of one character. The child will read the whole play while studying his part, but no loss of interest results because the novelty of impersonating a character usually serves to sustain interest. This type of oral reading is especially desirable for corrective work in voice, speech, and expression. Many selections suitable for this type of reading are found in such books as the following:

- BARROWS, MARJORIE. *The Pirate of Pooh and Other Plays*. Rand McNally & Co., Chicago; 1936. (Grades 2-7.)
- FIELD, RACHEL. *Patchwork Plays*. Doubleday, Doran & Co., Inc., New York; 1930. (Grades 5-8.)
- SKINNER, E. L. and A. M. *Children's Plays*. D. Appleton-Century Company, Inc., New York; 1919.
- STEVENSON, AUGUSTA. *Children's Classics in Dramatic Form*. Houghton Mifflin Company, Boston; 1928.

## ASSIGNMENTS FOR INTENSIVE STUDY OF SELECTIONS

Research demonstrates that children usually obtain from an initial reading only a small fraction of the meaning of a story. Furthermore, unless help is given, re-reading produces little additional meaning. Instruction to meet this problem depends mainly on the teacher's ingenuity in motivating a second reading of a story. Various devices have commonly been used to motivate detailed reading, such as simple questions, suggestions to "find the part of the story you like best," and the naïve pointing of morals by such questions as, "Do you think it was nice of the boy to cheat the old man?" and "Do you think the boy should have helped the dog out of the trap?" This method, however, hardly provides sufficient motivation for one oral reading and certainly does not stimulate interest in a second reading of any story. Several types of assignments for motivat-

ing oral reading when the story has already been studied are found in Chapter 10, on study skills, under the headings of "Associational Reading" and "Thorough Reading." The exercises below indicate a few of the types of lessons under this general classification.

### IMPROVING THE ORGANIZATION AND SELECTION OF IDEAS

Specific assignments may be prepared to aid children in recalling the details of a story for later use in oral and written summaries to be given independently. For such an assignment the first direction would be given: "On the blackboard you will find a list of events that happen in the story you are about to hear. They are not in the right order. We shall read the story by sections. After each section is read, find the event that goes with it and write it on your paper." On the board are written statements of significant happenings in the story, in some such style as the following:

- A The boy saw two men running.
- B The boys opened the door and looked out.
- C They found a tree that had been cut down.
- D They found a package of nails.
- E The box fell into the water.
- F The men started to open the box.

To save the time of writing the statements, the child may indicate his choice of statement by copying the capital letter which precedes it.

A somewhat more difficult assignment of this type would consist of asking the children to write a headline or title for each section of the story as it is read. If the story is divided into ten sections for oral reading, each child should have ten numbers on his paper and write his title for each section as read. He should also write a title for the story

as a whole. This assignment will be made more dramatic if the children are told that they are writing newspaper headlines or perhaps captions for a motion-picture story.

#### NOTICING THE STRUCTURAL ELEMENTS OF A STORY

After the story has been read silently, it may then be read orally for one or more of the following purposes: To notice good action words, descriptive words or passages, apt combinations of words, topic sentences, transition statements, and other structural elements. As each paragraph is read the pupils report orally the elements that seem particularly good. The teacher also adds comments. This type of assignment is useful in the intermediate grades, particularly as an aid to written composition.

#### ENRICHING IMAGERY

It is quite possible that the pleasure one derives from a story depends upon the imagery accompanying the reading. Children vary considerably in the richness and type of imagery experienced during reading. Reading and also listening are, of course, creative activities. The imagery experienced by a child while listening or reading depends partly upon previous contacts with the words, phrases, and ideas of the story and partly upon new associations to which his attention is called. Even the simplest statements suggest many pictures. On hearing a statement such as "The man ran down the steps," a child may add numerous details, such as the man's age and appearance, the speed of his running, the direction taken at the bottom of the steps, the appearance of the building from which he came, the general surroundings, the width and type of street, the general weather conditions, and the presence of automobiles or people.

Few investigations have been made of ways of improving

imagery in reading and listening; yet it is likely that the power could be increased by instruction. To promote richness of imagery, it is suggested that the following type of lesson be employed as a listening assignment in oral reading. Begin by saying: "I know you have read the story yourselves, but I wonder whether you have seen all the pictures in the story. After Henry reads the next paragraph, let us stop to see whether we can find any more pictures than we saw the first time." After the paragraph has been read, questions may be asked in order to stimulate the children to add other descriptive elements. Such questions might concern the appearance and dress of the characters, the distance and direction of travel, the kind of weather, the sounds to be heard, the emotions of the characters, and other details pertinent to the paragraph.

#### SUGGESTING ACTIVITIES RELATED TO THE STORY

Oral reading that calls for close attention and is effectively motivated usually results from assignments that involve or anticipate some class or individual activities, such as drawing or dramatizing. Three illustrations are given here:

(a) As you listen to this story, think of five or six pictures which sum up its most important parts. When you have finished reading, discuss with other pupils the pictures you found and decide on the best ones to draw. Then draw pictures which contain the main points of the story.

(b) As you listen to this story being read, think of similar things which have happened to you or to people you know. Write down your thoughts so that you can have them for our discussion after the story is read.

(c) As you listen to this story, think of the things we would need if we were to make a play out of it. What would we put on the stage? How would we dress the characters? What would we have them say?



Assignments such as these serve to develop the habit of expecting reading to contain ideas for further activity. They also stimulate thought and conversation and may serve as motivation for oral and written composition.

#### PHRASE READING IN ORAL ASSIGNMENTS

In a complete program of oral-reading instruction there are times when attention should be directed to problems of expression rather than to the meaning of the story. Before selections are used for practice in the mechanics of expression, they should have been read for meaning, using one of the lesson types already discussed. Poetry and drama are particularly useful for such practice, although other types of reading material may be chosen.

In reading to improve phrasing the pupil doing the reading of course derives the most benefit. For this reason small-group work is particularly desirable in order that each child may have frequent reading opportunities. Since the audience gains little benefit from the practice, this type of oral assignment should be used sparingly, perhaps only when the children are outstandingly deficient in the mechanics of reading and expression.

#### RE-READING FOR MEASUREMENT

In remedial work with individual pupils or with small groups, oral reading of material previously used will provide a measure of progress. Upon the child's first oral reading of the selection the teacher records the pupil's errors and files this record for later comparison. The record should include time required for reading, difficulties with individual words, addition and omission of words, and similar difficulties. Comparisons made with the second reading will show the degree of improvement which the child has made. In individual tutoring, such oral re-reading is important and

occasional tests of this kind should be made in the primary grades to provide objective records of progress. Such records are best made on a copy of the story.

### PHRASE READING IN RELATION TO SPEED

For improvement of mechanics of oral reading, attention should be paid to voice, expression, and interpretation rather than to speed. If the child knows he is being timed while reading, he will often manifest insecurity and tenseness, both of which shift attention from expression and meaning.

Among the factors which tend to reduce oral-reading speed are difficulties in word recognition and in perception of words and phrases; repetitions of words and phrases; addition and omission of words; losing the place; and difficulties in breath control and voice. These basic abilities are the ones that call for special attention.

### SYMPTOMS AND CAUSES OF SLOW PHRASE READING

Occasionally a child tends to drawl vowel sounds of words in oral reading or paces his reading to the slow motor habits acquired when reading was laborious for him. If the phrase drills outlined below and the exercises in expression and interpretation are not sufficient to break up these habits, use of timed selections may be helpful.

Another cause of a slow reading rate is the habit of pointing along the lines with the finger during oral reading. This practice tends to emphasize small units and to pace the reading too slowly. While finger pointing is sometimes recommended for primary-grade children in order to establish a left-to-right reading habit, the resulting slow pacing and the shortened reading units offset any advantages of the method. The use of a marker under the lines is to be preferred. Several types of markers are suggested later in this chapter.

Head movements also tend to reduce oral-reading rate. If the child forms a habit of swinging his head from side to side at a uniform rate, he unconsciously reads at this rate. This habit is usually overcome merely by calling the child's attention to it, or, in severe cases, by having the child read with his chin resting on his hand or some other support.

The need for improvement in phrase reading is indicated by word-by-word reading, many eye movements per line, an expressionless voice, and a slow rate. Often the basic difficulty lies in slow or faulty word recognition. When exercises are given to speed up recognition, phrase reading improves naturally without further help. The use of phrase exercises, as described below, will often improve speed in oral reading and both speed and comprehension in silent reading, reduce oral-reading inaccuracies, eliminate habits of addition and omission of words in oral reading, and improve attention to punctuation and expression in oral reading.

#### TECHNIQUES FOR IMPROVING PHRASE READING

The exercises below have been found useful in improving phrase reading, assuming that certain fundamental reading conditions have been met. Materials must be of appropriate difficulty, without too many new words or ideas to interfere with smooth reading. Words included in phrase drills should have been previously taught through the word-recognition exercises included in Chapter 8, and their meanings should be already known.

Phrase work is essential to reading progress. The exercises should be followed by their immediate use in the succeeding reading lesson, either oral or silent. Many sample exercises on word recognition presented in Chapter 8 are immediately adaptable to phrase exercises.

The relationship between correct phrasing and meaning should be emphasized in all phrase exercises.

### PHRASE FLASH CARDS

Phrases from stories to be read may be placed on large flash cards for drill work, after the individual words have been taught in recognition exercises. Phrase flash cards are presented by the usual short-exposure method. The technique recommended is to place a phrase card in a holder; hold a large blank card in front of it; then raise and lower the large covering card quickly, so as to give the brief exposure desired. This technique is more satisfactory than holding the phrase card in the hand and exposing it by turning it over. In the recommended method the print of the phrases is stationary, while in the other it moves. However, the second method of exposure can be satisfactorily used.

Sometimes it is found that the learning of phrases by flash cards does not transfer to the normal reading situation; the child can read flash cards but is not able to recognize the same phrases on the book page. This can be corrected somewhat by having the child underline or encircle on prepared typed lists the phrases presented by flash cards. Also the phrases as they appear in the story may be singled out by the use of a mask over the page, with holes cut out to reveal the phrases. This device is illustrated in Chapter 8.

### PHRASES ON THE BLACKBOARD

Phrases from stories to be read may be written (printed) on the blackboard for practice. Unless provision is made for covering and uncovering the phrases quickly, this drill will not be as effective as that with flash cards, but the child does obtain practice in seeing and reading whole phrases. If several children read in turn from the same list, the teacher should skip about in the list to guard against mere memorization by order.

### PHRASES ON LANTERN SLIDES

Lantern slides containing phrases may be prepared by the method described for word-perception slides in Chapter 8. These phrases can be flashed readily by covering and uncovering the lens of the projector with a card.

### PHRASE EXERCISES WITH THE TACHISTOSCOPE

The phrase tachistoscope insures the quick perception of phrases required for smooth oral and silent reading. The phrase tachistoscope resembles the device used in word-recognition exercises (see page 178), except that the aperture for exposing words is wide enough for phrases. Phrases may be typed on tachistoscope cards in random order or the phrases of an entire story may be presented in sequence.

### USE OF SPACED MATERIAL

The material to be read is arranged with the phrases separated by extra spaces in a manner such as the following:

By this time      the big bear      had disappeared  
into the woods.      Dick ran      across the field  
as quickly as he could      and soon came  
to the edge      of the woods.

After the story has been presented in this way, the child turns to the book and reads it with the phrases unmarked. The practice thus carries over directly to the material in the book. Gradation of the emphasis on the phrasing may be accomplished by first separating the phrases by five spaces and later by only three. The child should be trained to observe the entire phrase carefully before he reads it

aloud. This will provide practice in increasing eye-voice span.

In separating a story into phrases, either by typing or by pencil markings, the teacher will find it difficult to determine the beginning and the end of phrases. Certain phrases will appear long, while other divisions will leave individual words dangling by themselves. The best practice is to mark by voice units and to have no phrases with fewer than two words or more than six. One should not be too much disturbed if the phrases are not of uniform length.

#### PHRASE EXERCISES THAT DIRECT EYE MOVEMENT

A manila envelope 9" by 12" in size is prepared as follows: The bottom and the top are cut off evenly so that both ends are open. Two inches from the top of the envelope front a slot  $\frac{1}{4}$ " wide is cut the entire width of the envelope. The drawing on page 131 shows the appearance of the envelope when prepared. On a sheet of paper 8½" by 11" are typed or printed phrases. Five or six spaces are allowed between phrases across the page, and two lines down the page, as indicated below.

By this time

the big bear

had disappeared

into the woods.

Dick ran

across the field

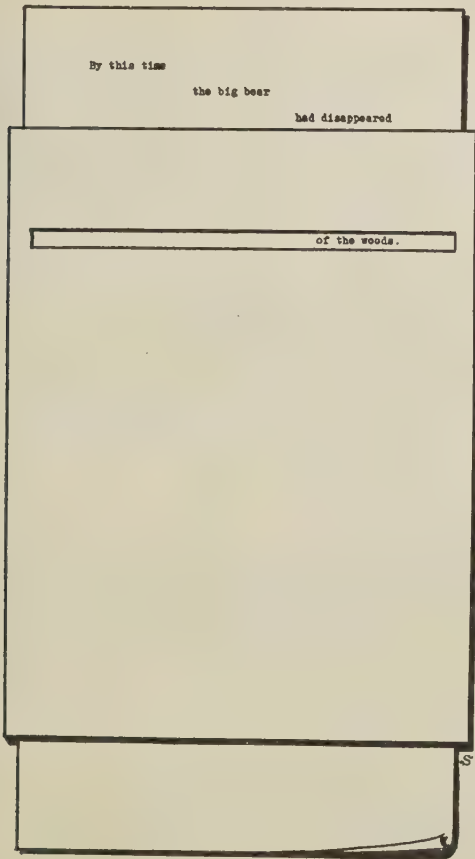
as quickly as he could

and soon came

to the edge

of the woods.





DEVICE FOR DIRECTING EYE MOVEMENT

If the story is a long one, several sheets may be glued together. The phrases thus prepared are inserted in the envelope and are drawn slowly past the slot. Each phrase appears separately and moves across the opening so that eye-movement practice as well as drill in phrase reading is provided.

## *BASIC READING ABILITIES*

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### READING PHRASES MARKED IN A BOOK

Phrases in a book may be marked by light vertical pencil lines to guide children in phrase reading. After pupils have read the book with the marked phrases, they should transfer to a book with unmarked phrases for practice in reading without the "crutch" of the penciled divisions.

### RECOGNITION OF PHRASES AS READ BY THE TEACHER

As the teacher reads, the children make light pencil checks in the book at pauses between phrases. At first the phrases will need emphasis, while later only slight pauses need be made between them. This is a good exercise to develop consciousness of the need for reading in phrases.

### READING IN UNISON

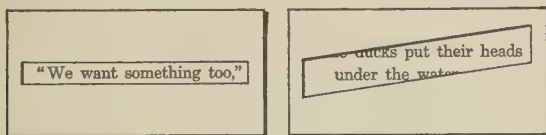
Occasionally it is desirable to have unison reading of materials prepared either by separating phrases by pencil marks or by extra spaces in typing. Advanced groups may read in unison materials which have not been separated into phrases.

### EYE-VOICE-SPAN EXERCISES

The method described in Chapter 2 for measuring the eye-voice span can be used for practice in keeping the eyes in advance of the voice. This is accomplished by placing a card over the material which the child is reading, and then asking him to recall as many additional words as he can of the covered materials. Another method is to present the material on lantern slides and have the children recall all the additional words they can after the light is off or the slide removed. This can also be accomplished by covering and uncovering the front lens of the lantern instead of removing the slide or shutting off the light.

USE OF LINE MARKERS

Often a child is confused by the many words before his eyes at one time. Such a child gains security by using a marker to exclude the lines not being read. The usual marker consists of a card which is placed under the line. This marker, concealing the material below, gives greater emphasis to the line being read. Another type of marker consists of a card with a slot in it which reveals one line of print at a time. (See diagram below.) The length and the width of the slot will vary with the size of the type and the width of the lines on the page.



The third type of marker has the slot cut diagonally across so that the end of a line appears at the right side of the marker, while the beginning word in the next line appears at the left side of the marker. This type of marker reveals the phrase being read and also aids the child to overcome a difficulty in returning the eyes to the beginning of the next line.

In individual remedial work it is often desired to point out a single phrase to the child. The marker in the illustration below may be used for this purpose. It is built in the manner of a slide rule and may be made of strong manila paper. A strip is cut  $1\frac{1}{2}$ " in width and the long edges folded over  $\frac{1}{4}$ ". A slot for phrase reading is cut in the strip. A second strip of manila an inch wide is then inserted under the folded edges and adjusted to phrases of varying lengths.



### MECHANICAL DEVICES FOR PHRASE EXPOSURE

The American Optical Company <sup>1</sup> has developed a quick-exposure device called a Metron-O-Scope, which provides exercises in phrase perception. The Harvard Film Service <sup>2</sup> has prepared films which provide phrase exercises and may be used in an ordinary 16 mm. motion-picture projector. Phrase exercises by means of such devices must be based on a suitable vocabulary and must be supplemented by comprehension exercises. Otherwise the increased speed and improved eye movements may be gained at the expense of comprehension.

### OTHER METHODS OF PHRASE READING

Books with especially large and clear print sometimes help in phrase reading, since they give an impression of ease in reading. However, if print is too large, phrases may be broken too much; therefore, if large print is used, it should appear on wide pages.

Often dramatization and the reading of poetry improve phrase reading. Sometimes the only phrase work needed by certain children consists of the suggestion to catch large units of words at each look. In all phrase work it is helpful to explain how the eyes move in phrase reading, as compared with word reading. When this is done, the child has little difficulty in understanding the purpose of the work. Other methods which help phrase reading are outlined in the section on voice and expression immediately below.

### VOICE, ENUNCIATION, AND EXPRESSION

Good habits in voice, enunciation, and expression are important in all oral reading—for the pleasure of the

<sup>1</sup> Southbridge, Massachusetts.

<sup>2</sup> Harvard University, Cambridge, Massachusetts.

audience, for improving general speech habits, and for proficiency in learning words and in deriving meaning from material read. If a child's pronunciation of a word is uncertain or if his enunciation lacks clearness, he will experience difficulty in retaining the word and understanding it in later reading. Faulty enunciation also affects perception of differences and similarities in words, thus delaying word mastery. Faulty enunciation is a common source of spelling difficulties.

Meanings of many sentences and the beauty of poetry are not appreciated until the child reads with proper rhythm and emphasis. Feelings of pleasure and pride in the clarity of one's speech in oral reading often carry over to conversation and audience speaking.

In giving practice for improving expression in oral reading, the teacher should point out that the desirable qualities of oral reading are also important in speaking. However, a child's speaking habits may be satisfactory, while his oral-reading habits are poor. A good reading voice (and especially a good speaking voice) is often one of the most important acquisitions that a child makes in school.

#### METHODS OF IMPROVING VOICE PITCH

A high-pitched voice in oral reading is most frequently a result of tenseness and insecurity, due to difficult material or to the emotions arising from the situation. Word difficulties can be removed by using simpler materials and by giving exercises in word recognition and phrase perception. The tenseness then disappears and the voice approaches the right speaking tone.

High-pitched voices sometimes result from poor motivation and a low reading interest. Again, they may develop from too intense pressure of classroom work or from unconscious imitation of the teacher's voice. Usually the pitch of a voice is habitual rather than natural.

A child's reading tone may be changed without injury to his vocal apparatus. One need not hesitate to modify a child's voice to obtain the easiest and pleasantest tone for oral reading. Almost every person has several pitches of voice for different occasions. Usually the voice is higher during fright, anger, and other strong emotions. It is also raised during attempts to be especially convincing. Some persons' voices vary with situations, such as talking to superiors, talking over the telephone, speaking before a friendly audience, dictating to a stenographer, or talking to children.

The following plans have proved to be helpful remedies for high-pitched voices:

### REMOVAL OF WORD-RECOGNITION DIFFICULTIES

This is accomplished by selecting materials that are not too difficult and by use of word-recognition exercises prior to the reading. It can be observed that pitch of voice almost always rises to parallel the difficulty of the reading material. High-pitched voices cannot easily be changed when insecurity and confusion accompany the child's reading.

### SHOWING THE NEED FOR A LOWER PITCH

Take the child to the piano and compare for him the pitch of his reading voice with that of his conversational voice. This is done by noting his tone on the long vowels and having him prolong them until the pitch is found. The teacher should demonstrate the difference in tones by reading in a monotonous tone at a higher pitch and then at a lower pitch, keeping the regular tone for contrast by striking the piano keys. To show the difference between a child's reading and speaking voices the teacher may imitate him; care must be exercised, since this practice may embarrass the child.



#### USE OF PIANO TO FIND A NATURAL PITCH

At the piano have the child sing various notes to determine his range of pitch. Determine the lowest and the highest tones he can comfortably produce. The proper pitch for his voice is three or four notes above the lowest one he can speak or sing easily. It should certainly be below the middle of his voice range. It should be remembered that in reading, the expression comes partly from varying the pitch, this variation usually being upward from the normal tone. To give practice in reading at the lower tone, the teacher strikes the piano note corresponding to the child's proper reading voice, and the child reads on that tone.

#### USE OF EXAGGERATED EXAMPLES

The teacher reads with her voice pitched as low as possible and asks the child to follow her example. The reading may be done with a very high pitch or a very low one, giving the child practice in reading with flexibility of voice. Many coaches of amateur plays use the exaggerated example to show the actors the desired effect. Of course the pupil's effort will not be as exaggerated as the teacher's, the result thus being approximately the desired one.

#### EXERCISES FOR IMPROVING EXPRESSION

Dramatization or part-reading of stories containing much conversation, with special attention to expression, will help to overcome voice difficulties. In such reading the effort is to interpret the material in ways that are natural to the situation. In his attempts to present sentences and expressions in a normal manner, a child's fear of an unnatural voice is often overcome.

Monotonous tone and inadequate expression in reading are often accompanied by difficulties in voice pitch. At-

tention to pitch will also aid in correcting the other faults. For the corrective exercises suggested below the reading materials should be familiar to the pupils. In corrective voice work for oral reading, familiar stories enable the child to use previously acquired meanings as an aid to expression.

### READING OF POETRY AND PLAYS

Use of poetry and plays helps to overcome monotonous tones, since attention is given to interpretation and since errors in reading the lines are immediately checked by other pupils. The fun of reading a play comes from careful interpretation of the lines. For some children reading poetry is particularly difficult; either they engage in monotonous scanning of lines or they ignore meter and thus break up the rhythm. Selections for voice work should enable children to read easily without exaggeration of metrical units.

### READING SENTENCES WITH WORDS MARKED FOR EMPHASIS

As preliminary practice to show the importance of emphasizing the proper words and varying the voice accordingly, it is well to demonstrate how meanings of short sentences depend upon emphasis. As an example, take a simple sentence such as the following: "*He* dropped a box of crayons." "He *dropped* a box of crayons." "He dropped a *box* of crayons." "He dropped a box of *crayons*." Children find a great deal of pleasure in this sort of exercise and learn to understand the importance of emphasis on particular words through voice modulation in determining the exact meaning of a sentence.

Next the child should read paragraphs with words to be emphasized previously underlined by the teacher. He should read the material silently before trying it orally. Later the child himself should underline the words to be

emphasized, and finally by a preliminary reading should learn to select the words for emphasis without underlining them.

#### STEPS IN OVERCOMING FEAR OF AN AUDIENCE

If high-pitched or monotonous voices result from fear of the audience, several remedies are available. The child becomes less aware of the audience when one of the following plans is used:

- a.* An imaginary radio broadcast at which the person reads behind a screen.
- b.* A puppet or marionette show in which the audience watches the action of the puppets while the pupil reads the lines accompanying the action.
- c.* Reading material to accompany shadow plays.
- d.* Reading from a lantern slide with the room darkened.
- e.* Reading into a microphone placed in a separate room.
- f.* Reading into a sound-recording device and then listening to the record of one's own voice.

#### TECHNIQUES FOR CORRECTING FAULTY ENUNCIATION

Faulty enunciation may be due to careless speech habits or to structural defects. If the child has an articulatory speech defect, special corrective work is needed. However, if the enunciation difficulties are due merely to careless habits, it is possible to correct them for purposes of oral reading, even though the new skills may not transfer to speech. The following suggestions for remedial work assume that the faulty enunciation is a result of habit:

#### CALLING ATTENTION TO THE SOUND ELEMENTS OF WORDS

The ear-training exercises recommended in Chapter 9 will help the child if poor enunciation is due to lack of

## *BASIC READING ABILITIES*

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attention to word sounds. In such exercises it is particularly important that the child sense the value of each syllable in a word and include all the syllables in his reading. Words should be presented in syllables, both visually and orally, with special attention to correct vowel sounds.

### READING IN WHISPERS

If a child is required to read in whispers, he finds it necessary to make unusual use of lips and tongue, since the voice then cannot cover enunciation defects. Whispered reading should not be for too long a period, for it necessitates great effort and results in strain and fatigue, particularly if the child must be heard several feet away.

### ENUNCIATING DIFFICULT WORDS

Practice in enunciation can be made specific by using words the child commonly enunciates inadequately. If the drill is designed to correct his specific errors, a child will usually pay close attention and practice on his own initiative.

### CALLING ATTENTION TO PROPER USE OF THE SPEECH ORGANS

The child may watch his lips in a mirror as he speaks in order to notice whether or not he uses his lips adequately. In cases of serious difficulty it is important to show the child the exact positions of lips, teeth, and tongue in making certain sounds. Some teachers motivate this work by calling attention to the diction of certain motion-picture actors or actresses who have a particularly good enunciation.

### HAVING THE CHILD LISTEN TO HIS OWN ENUNCIATION

Listening to one's own reading is possible only if a sound-recording device is available. When a child can listen to

his own reading voice, his specific faults and the desirability of overcoming them are brought to his attention in a dramatic way. It is usually necessary to point out difficulties with particular words, inadequate emphasis on final sounds of words, slurring syllables within words, ignoring little words, and other errors in enunciation that have previously been observed.

# REFERENCES

Chapters dealing with oral reading may be found in the following books:

- McKEE, PAUL. *Reading and Literature in the Elementary School*, Chapter XV. Houghton Mifflin Company, Boston; 1934.
- National Society for the Study of Education. *Thirty-Sixth Yearbook*, Part I. *The Teaching of Reading: A Second Report*, Chapter X. Public School Publishing Company, Bloomington, Illinois; 1937.
- STONE, C. R. *Better Advanced Reading*, Chapter IX. Webster Publishing Company, St. Louis; 1937.

Teachers' books on speech difficulties include the following:

- BARROWS, S. T., and CORDTS, A. D. *The Teacher's Book of Phonetics*. Ginn & Co., Boston; 1926.
- RAUBICHECK, LETITIA. *How to Teach Good Speech in the Elementary Schools*. Noble & Noble, Publishers, Inc., New York; 1937.

Books designed for children's use in speech correction include:

- ABNEY, LOUISE, and MINIACE, DOROTHY. *This Way to Better Speech*. World Book Company, Yonkers-on-Hudson, New York; 1940.
- CASE, I. M., and BARROWS, S. T. *Speech Drills for Children in the Form of Play*. Expression Company, Boston; 1929.
- RAUBICHECK, LETITIA. *Improving Your Speech*. Noble & Noble, Publishers, Inc., New York; 1934.
- SCHOOLFIELD, LUCILLE D. *Better Speech and Better Reading*. Expression Company, Boston; 1937.

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## CHAPTER 7

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### SILENT READING

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**A**N IMPORTANT aim of elementary school instruction is mastery of silent reading. The fluent and accurate silent reader can succeed in high school and college study, and through leisure reading will open for himself a world of information and pleasure. The individual with immature silent-reading skills finds his later education difficult and confusing and tends to give up the rich social heritage preserved in books.

The person who plans his leisure reading intelligently has infinite possibilities for personal growth. Independent, planned silent reading produces many desirable results — development of one's vocational abilities, increased enjoyment from new fields of knowledge, enhanced pleasure from travel, enriched understanding of the everyday world, expansion of interests, establishment and strengthening of friendships, enlarged rewards from conversation, stimulation of general effort, and greater mastery of emotions and actions. These results, of course, do not come solely from mastery of the mechanics of silent reading, but they are unlikely to develop fully without control of skills.

This chapter deals primarily with simple silent-reading abilities, such as attention and comprehension, improved speed, and vocabulary growth. Guidance methods in independent silent reading are found in Chapter 4; study skills in the content subjects are discussed in Chapter 10.

#### DIFFERENCES IN SILENT AND ORAL READING

While silent and oral reading have many skills in common, success in one does not insure equal success in the



other. Comparison of results on oral-reading and silent-reading tests often reveals entirely different habits in the two types. A child who is painstaking and accurate in oral-reading word drills may ignore difficult words in silent reading. Children who find oral reading interesting and understandable often show inattention and insecurity when asked to read silently.

After the third grade, oral reading is usually slower than silent reading, pupils being no longer impeded by the vocal organs and being able to translate printed words directly into ideas without pronunciation of individual words. Habits of saying words during oral reading carry over to silent reading as lip movements and whispering; these need elimination to insure fluency in silent reading. The table below shows a comparison of oral-reading and silent-reading rates for various grades. The table is based upon data from studies made in the Boston University Educational Clinic.

RATE IN WORDS PER MINUTE

GRADE . . . . .	I	II	III	IV	V	VI
Oral Reading . .	45	80	110	135	150	170
Silent Reading . .	45	78	125	156	180	210

#### GENERAL CONSIDERATIONS IN SILENT-READING INSTRUCTION

In planning the silent-reading program for any grade the teacher will find helpful suggestions in earlier chapters. The silent-reading program must recognize problems related to selection of materials, organization and administration of small-group work, as well as motivation. Development of an adequate background in word meaning, word recognition, word analysis, and phrase perception, discussed in later chapters, is also pertinent to silent-reading instruc-

tion. The silent-reading program must include adjustment to various levels of reading ability; it should appeal to the reading interests of the class; it should give attention to the special confusions and difficulties discovered in the informal analysis discussed in Chapter 2.

### PRIMARY-GRADE INSTRUCTION

Silent-reading instruction should begin in the first grade and should be continued in the school program as long as habits are to be developed or interests explored. Whether silent reading or oral reading should predominate in the primary grades has been the subject of controversy. Proponents of initial silent-reading instruction reason that increased attention to meaning is obtained through exclusive use of silent reading and that oral reading merely gives practice in word pronunciation. Attention to voice, enunciation, and expression in oral reading is thought to interfere with an understanding of the material being read.

The more general practice in primary grades is to stress oral reading for slower learners, and to balance the two types of reading for the rest of the class. The merits of oral reading in primary grades and remedial-reading classes were discussed in the preceding chapter. Oral reading is important in the primary grades for observing growth in word-recognition skills and in perception of larger units of material, but emphasis on silent reading continues.

### COMPREHENSION AND MEANING

Major difficulties in silent-reading comprehension result from lack of understanding of the words and concepts included in selections. If a child has difficulty understanding materials read, the causes may be inability to comprehend many word meanings, or habits of ignoring difficult or new words. The selections for silent reading should be scanned for words which may not be recognized by the

child or for which he has no meaning background. Often simple words which he can pronounce have strange meanings in particular selections.

If the child has had no previous experience with the subject matter, it will be necessary to enrich the reading by exercises such as are outlined under "Word Meanings," in Chapter 8, page 166, and to provide illustrations and activities to render meanings clearer. Without this introduction, comprehension will be vague and indefinite. If exercises to increase imagery from reading, described on page 123 in Chapter 6, are used, growth in accuracy of interpretation often results.

#### COMPREHENSION AND ATTENTION

Inattention is a common difficulty in silent reading. Adult readers often find themselves looking at words and turning pages and then discover suddenly that comprehension has stopped. The habit of inattentive "word seeing" may become severe and persistent early in a child's reading development.

Inattention is found on all levels of reading achievement. Usually it results from lack of interest in the material and lack of purpose in the activity. Sometimes inattention appears among conscientious readers who attempt to remember earlier material, and finally discover that holding in mind both old and new facts is impossible. The resulting confusion decreases attention and produces discouragement with the whole reading process.

Some children are distracted by ideas stimulated by the reading; their minds wander off to other interests while their eyes continue moving along the lines of the book. Emotional states, induced by fear of failure, by insecurity in reading practice, or by conditions in the school or home environment, occasionally render attention to reading content difficult or even impossible.

## *BASIC READING ABILITIES*

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### ASSIGNMENTS IN SILENT READING

For improvement of silent-reading comprehension and attention, it is important that the difficulty and length of assignments increase gradually. To build confidence and to provide for growth, beginning lessons should be easy. The child then sees that the task is not beyond him and that he is developing ability for future achievement. This is equally important for insuring progress in the new skills related to silent reading.

### VARYING THE LENGTH OF ASSIGNMENTS

When comprehension difficulty is severe, it is well to start with single sentences and questions, with provision for oral recall after each. Then simple short paragraphs may be used, followed by three or four paragraphs or a complete story. Exercises with short units focus attention on the meaning of the individual sentence and renew motivation at frequent intervals. As skill develops, less frequent prompting is needed. The child with severe attention difficulty often obtains more ideas from reading a single short paragraph than from an entire story. The attentive reader, of course, recalls more ideas as the length of the story increases. The importance of gradual increase in length of the units is apparent in individual teaching. The length factor is probably equally important for the class as a whole.

### VARYING THE DIFFICULTY OF ASSIGNMENTS

No material should be used in reading instruction for the content of which the child has inadequate background; yet even when the ideas discussed are familiar to the child difficulty may be encountered because of the number of abstract words, complexity of sentence structure, and

type of material used. The child with good word-analysis ability can read more difficult material than one with poor skill in word analysis. Grading of material should be based on the child's ability. At first materials that are simple in vocabulary and sentence structure should be used, but provision should be made for gradual increase in difficulty until the child learns to read and study material requiring close attention.

Silent-reading assignments may vary from an appreciation of the theme of a story to a detailed criticism of its structure and ideas. In Chapter 10 are given types of graded lessons in study skills. Some of these require limited comprehension, while others call for careful and painstaking evaluation during reading. As the pupil develops in silent-reading ability, assignments are increased in complexity.

#### SETTING A PURPOSE FOR THE READING ASSIGNMENT

Many investigations have shown that indicating to pupils the purposes of the assignments prior to the actual reading produces more satisfactory recall and comprehension than questions following reading. The child should know the purpose of his reading so that he can attend closely enough to solve his problem. Outside of school the individual always knows the purpose of his reading. In class he should also understand in advance that he is to read to get the gist of the story, to notice particular details, to catch descriptions or characterizations, to observe special uses of words or development of ideas, to watch for ideas useful in discussion, or to criticize a particular part. Purposeless reading or study of a selection without a clear problem except to answer routine questions leads to confusion and boredom.

The ultimate purpose to be served by information from

reading is also a significant factor in determining attention. If a child reads a letter telling him how to get to a camp in the woods, if he studies his part in a football play to be used in afternoon practice, or if he collects material for an individual report in class or assembly, his attention will not wander. His comprehension may be good, even with material that is difficult in vocabulary and sentence structure. The suggestions for purposeful activities presented in Chapter 5 should be followed for a class which is unable to maintain attention in silent reading and studying.

### USE OF QUESTIONS FOR IMPROVING COMPREHENSION AND ATTENTION

#### LISTS OF QUESTIONS

Children with attention difficulties in reading are often helped by lists of questions to be answered as they read. It is helpful to give one or more questions for each paragraph. Questions should be arranged in the order in which answers will be found. The child should study the question, and then read until the answer is found. The answer to the next question is then sought.

#### INTERSPERSED QUESTIONS

Some children are helped by reading materials with interspersed questions which recapture wandering attention. The paragraph below illustrates the type of material used.

Each boy carried a notebook and wrote down news which he heard. When enough news had been collected, the boys went to the house to prepare the paper for printing. What did the boys write in their notebooks? They wrote the articles on old paper first to correct mistakes. Bill wrote most of the news and Jack wrote the story. Why did the boys write the story on old paper first?



In this type of material the child must read understandingly without an assignment. This is somewhat more difficult than reading to answer questions. When the child cannot answer the question, he can look back. However, he should be encouraged to read so carefully that he does not need to look back. He may measure his improvement by recording the number of questions answered without re-reading. To correct the re-reading tendency, each part read may be covered with a card. Removal of the card to find the answer makes more evident the failure to get the meaning originally.

#### OBJECTIVE QUESTIONS

Questions for assignments to keep attention may be constructed in the various objective or short-answer form. The easiest form to answer is the *true-false* or *yes-no*, as illustrated by the following:

The story is about a circus.    Yes    No

The horse was eating corn.    Yes    No

This form of question requires only relatively limited comprehension. The difficulty of such questions could be increased, of course, by use of other words in the story.

Slightly higher comprehension is required to identify the right answer in the multiple-choice test. The following are examples of this type:

Robert Fulton's boat was driven by —

wind      electricity      steam      gasoline

How long did the trip take?

one day    two hours    thirty-two hours    one week

Who did not like the boat?

Indians      fishermen      citizens      sailors

In this type of test, alternative choices may be words contained in the story. If so, a finer differentiation is required than if the incorrect answers are unrelated to the story. A higher level of interpretation is required when the correct response is worded differently from its appearance in the story.

A still more difficult comprehension check is the *completion* question. In this type the key word is omitted, the child supplying it from memory, without the help provided in the multiple-choice questions. Examples of this type of question follow:

The trip down the river took longer because the.....  
cut down the speed of the boat.

The airplane could not land because the field was full  
of.....

The largest diamond ever found weighed almost ....  
pounds.

A lower level of comprehension is required for success in true-false and multiple-choice questions than for oral or written recall. This mere identification of answers explains why a child often achieves a high score on a standard test in reading and yet is unable to read with understanding sufficient for class recitation. Work sheets for the above types of questions may be used repeatedly if the answers are written on separate sheets.

Many variations may be used to increase or decrease the intellectual difficulty of the questions. For example, if questions for increasing attention are given after the paragraph is read, the difficulty is increased. Questions requiring recall are easier to answer than those calling for interpretation or evaluation, such as selection of the best title or the best summarizing sentence for a story.

## UNAIDED RECALL FOR IMPROVING COMPREHENSION AND ATTENTION

Success in true-false or multiple-choice tests does not guarantee recall in independent speaking or writing. Written recall is a difficult skill, usually requiring the steps outlined in Chapter 10; oral recall is easier, more especially for primary-grade children. Ability to tell a story after reading should be constantly encouraged, the child thus becoming proficient in translating silent reading into conversation. For children with difficulty in comprehending long units, it is helpful to have the story told after each paragraph is read; then, as their skill increases, long units can be successfully retold.

When a child has had practice in telling a story orally, he may be asked to stop at the end of each paragraph and think through the material to determine whether he remembers it. In remedial work, checks in the margin indicate places to stop to consider whether the story can be remembered up to that point. However, summarization depends upon practice in oral recall based on units of various lengths.

Other devices for improving written and oral recall are found in Chapter 10. Note taking, for example, often serves to strengthen memory and to give greater security in organization and recall of material read.

## WORD MASTERY IN SILENT READING

### ATTENTION TO UNFAMILIAR WORDS

The habit of ignoring difficult or unfamiliar words during silent reading is extremely common among poor silent readers. It is probably general among adults as well as children. Almost every person has had the experience of learning the meaning of a new word and soon finding it

several times in his reading. Probably the word was in previous reading material but was ignored. The prevalence of this faulty habit in the intermediate or upper grades can be demonstrated by a simple experiment. Ask the pupils to read a chapter in any textbook they are using and write down all the unfamiliar words. If the material is not too simple, the better readers will discover more unfamiliar words than will the poorer ones.

Attention to unfamiliar words is particularly important if the child is to increase his vocabulary through extensive reading. The child who ignores difficult words in silent reading fails to accumulate gradually a word's many meanings, which is a factor in enlarging one's vocabulary. Through silent reading the good reader generally acquires an extensive meaning vocabulary even though unable to pronounce all the words encountered. Often he has an exact understanding of them from noting many shades of meaning during reading. Even adults who know the exact meaning of such a word as *misled* often pronounce it as *mizzeld* or *misseld* or *mizeld*. While it is desirable to pronounce correctly all words met in silent reading, this is not basic to reading development. However, if children fail to notice unfamiliar words, they are unlikely to grow in understanding of meanings.

### MEASURING DIFFICULTIES WITH UNFAMILIAR WORDS

There are several ways of measuring deficiency in discovering unfamiliar words. Oral reading preceded by silent individual preparation is especially valuable. If the oral reading reveals that the child has failed to read carefully several words met during the silent preparation, the child can then understand the need for attention to unfamiliar words.

Another method for discovering deficiency in locating

unfamiliar words consists of using the word-matching test with a fairly inclusive list of difficult words from a chapter already scanned. Such a test is described in Chapter 2. If a child's list of unfamiliar words is short and his errors in the test are many, he should understand that his difficulty is due to his not paying close attention to individual words in silent reading.

#### IMPROVING ATTENTION TO UNFAMILIAR WORDS

Several types of assignments are suitable for increasing attention to unfamiliar words in silent reading. An easy method consists of scanning the chapter for difficult words and listing them on the blackboard or duplicating them for individual use. Each child then reads the list and indicates the unfamiliar ones either as to pronunciation or meaning. In this way a child often recognizes his lack of understanding of certain isolated words more readily than he would if he merely encountered the words in the context.

An alternative method is to have the child note unfamiliar words in his reading and write them on a separate sheet. He should not be penalized for the length of his list, lest he shorten the list or give himself the benefit of the doubt when he is uncertain of the meaning of a word. The penalty for unfamiliarity with words sometimes consists of the difficult task of looking up their meanings in the dictionary.

Knowledge of word meanings is usually based on experience rather than native ability. The task of the teacher is to study differences in word knowledge and to help children of limited word experience. The child should understand that by revealing his difficulties freely, the teacher can better help him to overcome them. In the classroom there should be no penalty for ignorance unless it results from lack of effort on the pupil's part. Concealing ignorance leads to adult habits of timidity and avoidance of

## *BASIC READING ABILITIES*

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situations and experiences with which the person is unfamiliar. Admitting ignorance is a step to learning. If children are taught that unfamiliarity with words is natural but can be overcome by instruction, and if they are not penalized, they will be able to aid immeasurably the program of silent reading.

### IMPROVING ABILITY TO READ UNFAMILIAR WORDS

The following three-step exercise has proved effective in the intermediate grades in increasing the ability to read unfamiliar words and get their meanings from the context. First, the child reads a chapter and makes a list of all unfamiliar words. Second, he takes a word-matching test on the thirty or forty most difficult words in the chapter. Finally, he re-reads the chapter with the word-matching test before him to determine the amount he can improve his score by noticing word meanings in sentence context. Comparison of his scores on the separate parts of this test indicates his needs. A short list of unfamiliar words and a long list of failures on the matching test indicate failure to discover new words in reading. A long list of unfamiliar words and few failures on the test demonstrate mastery of many words which to him seem new. Inability to improve his test score by re-reading a chapter tells the pupil that he needs help in use of the context to discover word meanings. Marked improvement in the test score following use of the context indicates that skill in discovering word meanings is fairly well developed. Thus these three tests provide effective practice for increasing ability to discover new words and get meanings from the context.

### PRECAUTIONS IN ATTENTION TO UNFAMILIAR WORDS

Certain precautions should be observed in use of the word exercises described above. Concentration on indi-



vidual words practically always lessens attention to the total meaning of a selection. Exercises should be used primarily with children whose scores on informal tests reveal need for help in specific skills. If the child has established good attention habits, and has a growing meaning vocabulary derived from observation of word usage, the exercises just described have little value for him.

It is not necessary to teach every unfamiliar word. Many should be postponed until the child becomes more mature. Authors of juvenile books are not always aware of words suited to various grades. Furthermore, the meaning of most selections can be understood without a knowledge of every word. The fact that an author considers a word important does not necessarily mean that it should be permanently retained by all readers.

Word exercises of the type just described should be used only occasionally to call attention to the need for these skills. Certainly these exercises should not be given oftener than once a week, unless an intensive program is being undertaken to overcome the faulty habits. It is more desirable to focus attention on the knowledge and pleasure to be derived from reading than on a constant study of unfamiliar words.

#### INDIVIDUAL LISTS OF NEW WORDS

Some teachers have each child keep a vocabulary notebook for listing new words discovered in reading. It is not necessary for the child to verify the word in the dictionary before placing it in his notebook. Recording the word calls attention to its form and enables him to notice the word and its meaning in later readings. Vocabulary notebooks should usually contain a page for each letter, with new words listed under proper letters.

A child may be asked to find the meaning of new words in his vocabulary notebook. Attention should be called

to the large number of new words learned rather than to the extent of ignorance. Thus the slow learner may discover that he is adding words more rapidly and making greater growth in vocabulary than another pupil with higher achievement. A frequency tabulation of unknown words for a class or a group may be based upon the individual vocabulary notebooks. Such a count may often guide an intensive program in vocabulary instruction or study of common word roots.

Several exercises outlined in Chapter 10, on study skills, also call attention to individual words and to vocabulary growth. Exercises for detailed reading necessitate knowledge of all words in the selection. Assignments for increasing imagery from reading, discussed on page 123 in Chapter 6, emphasize the importance of words.

### ENRICHING WORD MEANINGS

Enriching word meanings through silent reading is based on attention to unfamiliar words, use of context for acquiring meanings, and direct instruction on meanings of individual words. The steps for direct word instruction are outlined in Chapter 8. These include scanning a selection to be read silently, pre-testing for association of meaning, and enriching unknown words through conversation, pictures, or activities. Some provision is needed for recording new words learned by each child and for systematic reviews to maintain mastery of words learned.

### IMPROVING SILENT-READING RATE

No attempt should be made to improve the silent-reading speed until habits of accurate reading are established. Exercises for pupils with low achievement should be simple enough so that the child encounters few new words. Increased speed of silent reading is perhaps the easiest goal to

achieve. Speed tests of the type described in Chapter 2 given once or twice a week for six weeks will result in a large increase in speed of silent reading.

#### SPEED RELATED TO PURPOSE

It should be emphasized that speed is not basically important in many types of silent reading. Materials for oral presentation, such as plays, poetry, and speeches, usually require slow reading to bring out the full significance of sentences and richness of imagery. Reading for study often needs to be done slowly to insure careful attention to details and relationships and to note associations in thinking, planning, and comparing. However, reading speed should be *controlled* by the pupil's attention and not *limited* by his faulty basic reading skills. The child should always read as rapidly as his purpose permits and should know when to slow up his reading for greater efficiency and satisfaction.

#### GENERAL FACTORS IN INCREASING READING RATE

To speed up silent reading, certain principles should be observed. The reading material should not be too difficult. Generally exercises should contain few new words, and these should have been taught prior to the reading. The material should involve few word-recognition or word-meaning difficulties. To increase speed, materials should be a grade or two less in difficulty than selections usually read. Materials for speed exercises should facilitate rapid reading, such as simple narrative stories with plot as the predominant element.

Comprehension must be checked for every exercise. Rapid reading without comprehension checks encourages inattention. Questions should be limited to the "general idea" type. Four or five questions are sufficient for a five-

hundred-word selection. Questions should not be of the catch type, nor based on unimportant details. The chief purpose of questions is to emphasize attention to content. If content questions are not used in every speed exercise, the rate score will improve at the expense of comprehension or of honesty in reporting actual reading.

### MEASURING IMPROVEMENT IN SPEED

Material having been selected and comprehension questions prepared, reading speed may be measured by the method described in Chapter 2. The child should record his reading speed by words per minute for each exercise. Materials vary in difficulty, and he should understand that occasionally on later tests he may achieve lower scores than on earlier ones. Often a single book of reasonably uniform difficulty may be reserved for testing reading speed. Direct comparisons can then be made between later and earlier speed scores, since in this case changes in score are not attributable to the varying difficulty of the material. However, the average of two or three speed tests should be used to measure growth rather than the results of a single test during the administration of which the child may have been temporarily distracted or for some other reason unable to do his best.

### LIP MOVEMENT AND READING SPEED

Elimination of whispering often results in improved silent-reading rate. Whispering may be eliminated by such simple devices as holding an object, such as a paper clip or a pencil, between the lips or watching the child and informing him of lip movements.

Most children can avoid lip movements when asked to do so. However, lip-moving habits of long standing may reappear several times before being eliminated. Children

should understand that physical habits are not changed by a single effort and may return when attention is distracted. This tendency is true of habits of posture, enunciation, and other well-established motor actions. The child should learn, however, that new habits can be acquired.

#### INNER PRONUNCIATION AND READING RATE

Elimination of lip movements does not by any means guarantee the elimination of silent word pronunciation, a habit which is often found among college students and adults. Lawyers, physicians, engineers, and others who do much careful reading in college sometimes develop slow reading habits. Often their rates drop to one hundred and twenty words per minute and they are unable to increase speed even with simple narrative material. Although they do not move their lips, they pronounce to themselves every word or hear the words during reading.

Inner pronunciation is sometimes very persistent and a special method is required to overcome it. The pupil should be told that a paragraph will be presented which contains the answer to a certain question, such as "What is the earliest type of time-recording device?" Then he is shown the paragraph and allowed a very brief time to find the answer. The time allowed is determined by the length of the selection and the pupil's silent-reading rate. For example, if the pupil's rate is two words per second and the exercise is one hundred words long, so that fifty seconds would normally be required, a time allowance of only thirty seconds might be given in the speed test.

Meaningful material should be used, such as absurdities, nonsense, epigrams, oddities, and other complete but brief selections. Material may be exposed on flash cards. Actual reading should be preceded by an exercise which directs the learner's attention to the meaning rather than to the individual words. Looking for meaning under time

pressure usually breaks up the word-saying habit. The skimming exercises found in Chapter 10 are also helpful for overcoming laborious silent word saying.

### IMPROVED PHRASING AND READING RATE

Devices for improving phrasing in oral reading can also be applied to silent reading, with a resultant increase in rate. The Metron-O-Scope and phrases on films mentioned in Chapter 6 may be used for improving silent-reading rate. These devices may increase the silent-reading speed if drill in phrase perception is needed. Difficult words in the material presented should first be studied for meaning and for quick recognition before being presented in the machine. Attention to content should be provided by preliminary thinking assignments and by careful checks on comprehension.

Improvement of eye movements through these phrase-flashing devices is often not accompanied by improved comprehension. This result is possibly due to inadequate attention to comprehension during use of the machine or to failure to provide for individual differences in phrase ability and reading speed.

### INDEPENDENT READING AND IMPROVED SPEED

Of course the most natural method of increasing the silent-reading rate involves much well-motivated independent practice. If a child enjoys reading fiction and is eager to study the plot and discover the end of the story, he will usually increase his rate as rapidly as he grows in the skill. No artificial exercises can serve as a substitute for this extensive reading and it should receive a more prominent place in the reading program.



REFERENCES

Many practical aids in silent-reading instruction will be found in teachers' manuals of the various series of readers. Two excellent books containing interesting illustrative materials on the primary level are:

- SMITH, NILA B. *One Hundred Ways of Teaching Silent Reading*. World Book Company, Yonkers-on-Hudson, New York; 1925.
- WATKINS, EMMA. *How to Teach Silent Reading to Beginners*. J. B. Lippincott Company, Philadelphia; 1922.

On the intermediate level, the following books are recommended:

- McKEE, PAUL. *Reading and Literature in the Elementary School*, Chapters IV to VIII. Houghton Mifflin Company, Boston; 1939.
- YOAKAM, G. A. *Reading and Study*. The Macmillan Company, New York; 1928.

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## CHAPTER 8

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### WORD MEANING AND WORD RECOGNITION

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**D**IFFICULTIES with individual words constitute a chief handicap of poor readers. Words outside the reader's experience — unfamiliar words for which he has no meaning — cause serious difficulty in comprehension and interpretation at any level. In the intermediate grades this difficulty becomes especially acute because many words in required reading in social studies and natural science are completely unknown to slow or even average learners. Prompt word recognition is essential for smooth phrase reading. If long stops are required in order to recognize or analyze words, the flow of thought may be interrupted and memory of the content reduced. Recognition must be immediate to avoid extra eye movements. It is also important that the child be able to analyze words independently. Poor word analysis usually results in unsatisfactory reading and in unwillingness to work independently. An adequate reading program will include attention to these three major phases of word study: meaning, recognition, and analysis.

The relative emphasis to be placed on each of the word abilities depends upon the difficulties of the pupil. Word meaning is basic. Occurrence of unfamiliar words in reading material indicates the need of word enrichment through appropriate word-meaning exercises. Difficulties in smooth phrase reading may be due to hesitation on difficult words or to too great attention to each word — conditions which are likely to result from a program in which too much emphasis has been given to phonetics. To over-

come either of these faulty habits, quick-recognition drills are needed, which may include exercises both for individual words and for phrases. If the child lacks independence in solving or getting new words, or if he is slow and ineffective in word analysis, he needs specific exercises in these skills.

It should be remembered that classroom work in word meaning and word recognition is for immediate use, while word-analysis exercises develop general word power which will function in many situations. Consequently, word-meaning and word-recognition exercises are used daily in connection with the regular reading lessons, while practice in word analysis is generally given at a time other than the regular reading period and may be more closely related to spelling than to reading.

Without the child's having a clear understanding of the meaning of a word, recognition and pronunciation are difficult to teach. If meaning is not present, learning to pronounce a word quickly is merely the production of a non-sense conglomeration of sounds. Learning and retention are enhanced by a rich experience with the meaning of each word. It is equally important that the child be able to recognize the printed form of a word — that after seeing it he remember its appearance. The pronunciation and meaning of a word are not useful for reading unless the word's form is remembered. Word meaning and word recognition are closely interrelated in the reading program, and both are treated together in this chapter. Word analysis will be discussed in Chapter 9.

### BASIC CONSIDERATIONS IN MEANING AND RECOGNITION EXERCISES

A common complaint of teachers has been that words taught in word-meaning and word-recognition exercises are forgotten as rapidly as they are presented. Failure to re-

member words was attributed to faulty association or to inadequate functioning of certain capacities such as visual or auditory memory. However, if words are forgotten rapidly, certain factors, singly or in combination, usually explain the difficulties.

In the first place, too many new words may be taught in each lesson. In general, five or six new words a day, either for meaning or for recognition, provide a full load in the primary grades. In the intermediate grades two or three more words may be added. If the vocabulary burden proves too heavy, easier material may be needed with fewer new words, shorter selections, or even stories rewritten with an easier vocabulary.

Another cause of pupils' failure to retain may be that the words lack full meaning. A word may have numerous colorful associations for the child or it may have a single uninteresting one. In general, the enriched-meaning technique should precede other types of word exercises.

The child may be unable to distinguish the visual form of the word from others closely resembling it. In this case, use should be made of exercises for increasing visual perception. To some children the letters *m*, *n*, *h*, and *r* all look alike; to others *f*, *t*, *h*, and *k* are similar. For beginning readers the letters *b*, *d*, *p*, and *q* (since all are loops on stems) usually cause difficulty. Even when no difficulty with individual letters occurs, confusions may arise concerning words of similar length or shape.

Also the material itself or its method of presentation may be uninteresting. Children who lack reading interest or are not stimulated by the particular topics about which they are reading are unlikely to pay attention to the individual word exercises. If only a single type of meaning or recognition exercise is used, the possibility of retention is reduced.

Finally, physical difficulties may be present. A careful examination may reveal defects in vision or hearing, as well

as other conditions which might interfere with attention or perception.

With the above-mentioned considerations in mind as possible sources of ineffective practice, the teacher preparing either meaning or recognition drills should give special care to the choice of words to be included in the exercises. Usually meaning and recognition drills should be based upon words encountered in the daily lessons. In choosing these words the following guide will prove helpful:

- a. The selection to be read should be scanned by the teacher for words likely to be unknown to the group. When well acquainted with the reading-ability level of the group, the teacher has little trouble in locating words that are likely to cause difficulty. In preparing meaning exercises, it is well to notice whether a common word is used in an uncommon or unfamiliar sense; if so, it should be listed for study.
- b. Certain words, such as proper names and uncommon nouns, may appear infrequently in later reading and not need complete mastery and retention. When there is doubt as to a word's value, it should be checked against a list, such as the Thorndike,<sup>1</sup> Faucett-Maki,<sup>2</sup> Buckingham-Dolch,<sup>3</sup> or other list that indicates relative frequency of use. Words of high frequency and importance for different grades are listed in the Appendix of this book.
- c. The words selected should be tested to determine the need for enrichment of meaning. The simplest testing method consists of finding the number of associations which the children already have for the word.

<sup>1</sup> Thorndike, E. L. *A Teacher's Word Book: Revised*. Teachers College, Columbia University; 1932.

<sup>2</sup> Faucett, L., and Maki, I. *A Study of English Word Values*. Oxford University Press, New York; 1932.

<sup>3</sup> Buckingham, B. R., and Dolch, E. W. *A Combined Word List*. Ginn & Co., Boston; 1936.

Give directions of this type: "Tell me all the words you can think of when you hear the word *fire*." "Tell me all the meanings you can think of for the word *band*." If many responses come from the class, the word does not need special enrichment. If few meanings are given, the word needs special attention. The definition-matching exercises suggested in Chapter 3 also are suited to discovery of words needing enrichment.

- d. The words should be tested to determine children's ability to recognize them at sight. Such pre-testing is unnecessary with slow learners who are unlikely to recognize any of the words. With brighter groups unnecessary practice is avoided if words are tested with flash cards or by quick-exposure devices. These methods are described later in this chapter.
- e. Lists of new words in teacher's manuals or at the end of primary readers often provide the source of words for recognition and meaning exercises. However, the books must be suited to the reading ability of the children and all words that were new for previous lessons in any particular book or series should have been mastered.

### EXERCISES FOR WORD MEANING AND ENRICHMENT

Words are more easily learned when possessed of "color" or surrounded with many associations. A word may be "dull" if it has only one meaning, such as a dictionary definition or a simple definition given by the teacher or the class. Such a word will be learned with difficulty and forgotten quickly. A child may read a word correctly when it has one meaning and not when it has others. Emotional disturbances during reading — embarrassment, confusion, fear, extreme concentration — may cause loss of normal meaning associations of words known to the child.



When difficulties in word mastery are extreme, activities for enrichment of meaning should precede reading practice, even though the meaning of words may be known. In enrichment practice the word under consideration should be visible to the class — on the blackboard, on a flash card, or thrown on the screen from a lantern slide. During the enrichment period derivatives of the word, such as those ending in *ing*, *s*, *ed*, *er*, *est*, should also be shown.

### CONVERSATION ABOUT EXPERIENCES

The conversational or question method of enriching words may be used if the words for the day's lesson are within the children's experiences. The class should be encouraged to talk about their experiences in which use is made of the word. The effort should be to bring in the colorful rather than the trite or commonplace. The following are examples of questions to start this type of exercise:

- wheel:* Do you know of anything that has wheels?  
How many kinds of wheels have you seen?  
What kinds of wheels are there?
- shine:* Name all the things that shine.  
Name all the words you think of when you hear the word "shine."  
How do you make things shine?
- through:* Can you think of anything that goes through things? (Suggest if necessary rabbit through hole, stone through window, dog through hoop.)

### SHORT-STORY MATERIAL

Words for enrichment may be presented by weaving them into a story or several short stories. When telling the story to young children, pause at the key word, point to the printed form, have it pronounced, and then continue with sentence or story. The following examples illustrate

the method, although it is well to add several other sentences to continue the story:

*blew and into:*

- (a) The boy was wearing a big straw hat. All at once the wind ..... (point to word and have children pronounce it) the big straw hat across the road and ..... (show word) the pond.
- (b) All the children went ..... (show word) the dining room. The candles on the cake were all lighted. Louise drew a big breath and ..... (show word) every one of them out.

#### DIRECT ILLUSTRATION OF MEANING

When the word meanings are unfamiliar to the children, especially in middle-grade material, prepare several illustrations for each word to be given orally. Illustrations should contain child experiences, teacher experiences, characters or situations from previous stories, or incidents related to the story to be read. The following example illustrates the method:

*climate:* The word *climate* has a meaning somewhat similar to *weather*. Usually it refers to the year-round state of the weather. Can you think of people who live in warm climates? Can you think of explorers who lived in cold climates for a long time? If a country has warm weather all the year, we say it has a warm climate. Do you know anybody who lives in a warm climate?

#### DERIVATION OF WORDS

Word enrichment through word-derivation exercises is ordinarily limited to mature readers. In the middle grades interest in derivations may be stimulated, resulting in addi-

tion of much color to words. The teacher will find material for use in this connection in such books as *Picturesque Word Origins*.<sup>4</sup> Dictionaries and encyclopedias contain pictures and interesting information for enriching word meanings.

A statement like the following is suggestive: "The word *climate* has a similar form in other languages; in Latin it is *clima* or *climatis*; in French it is *climat*; in Greek it is *klima*, which is the earliest form of the word." If several languages are spoken in the community, it will often prove helpful to refer to the word of the same meaning in the other languages.

### USE OF ACTIVITIES AND CENTERS OF INTEREST

Enriching word meanings through activities is especially useful with young or dull children. It may be recommended as a motivating device as well as for word-enrichment value. Children who experience difficulty in learning and retaining words when presented in other ways, grasp meaning readily through activities.

Classroom projects will center around child interests and include such activities as building and furnishing a house or a museum, building a play farm or a model town, conducting a carnival or a circus, planting a garden, planning a vacation trip. The activities will naturally involve use of words in a way to enrich meaning. Special activities may be inaugurated for the particular purpose of developing meanings. These may include:

- a. Use of a bulletin board
- b. Sand table and construction work
- c. Making books from picture and clipping collections
- d. Trips to places of interest related to the work

<sup>4</sup> *Picturesque Word Origins*. G. & C. Merriam Company, Springfield, Massachusetts; 1933.

- e. Marionette and puppet shows
- f. Collection of library material: maps, catalogues, books
- g. Dramatizations, pageants, operettas

All prior or continuing activities and interests of the class may be drawn upon, such as sports, club projects, Boy Scout and Girl Scout organizations, and individual hobbies. In considering trips to places of interest the teacher should not overlook near-by construction work: a building, a bridge, a power plant, or a road. Any of these can provide a colorful basis for reading exercises and for word enrichment.

### VISUAL AIDS

Word meanings may be further enriched through visual aids:

- a. Lantern slides to aid oral presentation of words.
- b. Pictures and models.
- c. Stereoscope pictures.
- d. Motion pictures. Sources of free films are found in the H. W. Wilson Educational Film Catalog.<sup>5</sup>
- e. Picture dictionaries,<sup>6</sup> illustrated encyclopedias, and catalogues.

These types of lessons for word enrichment are planned for improving the meaning of particular words chosen from the day's lesson. Suggestions for building habits of attention to difficult words and their meanings — transfer skills — are found in other chapters. Building of words from common roots is suggested in Chapter 9. Exercises for

<sup>5</sup> *Educational Film Catalog* compiled by Cook, D. E., and Rahbeck-Smith, E. The H. W. Wilson Company, New York. Published annually since 1936.

<sup>6</sup> Watters, G., and Courtis, S. A. *A Picture Dictionary for Children*. Grosset & Dunlap, Inc., New York; 1939.

teaching the child to locate unknown words and to use the context to get meaning are found in Chapter 7. Suggestions for improvement of dictionary abilities are included in Chapter 10.

### SOME GENERAL PROBLEMS IN WORD RECOGNITION

Children learn to recognize words by the general appearance of a word rather than by exact letters. Often a part of a word stands out and serves as a cue for recall of the whole. Cues used by children to recognize words often lead to errors. The word *dog* is commonly misread as *girl*, probably because the *g* is the cue for the latter word. A first-grade boy with reading difficulty volunteered to write "Come with me to the tree," and wrote "o-w-e-t-h-ee." He then said, "O is a bad one because you never can tell whether it means *come* or *go* or *boys*."

One is never sure which part of a new word the child observes. The list below shows errors made by children when certain words were presented to them. It is significant that every error of recognition contains letters or phonograms of the stimulus word.

WORD PRESENTED	CHILDREN'S ERRORS
and	an, sat, fan, animal
away	was, way, when, awake
back	bark, lack, book, take, Dick, Jack, look
comes	came, can, come, house, some
kitten	cat, little, kitchen, kittens
many	and, away, may, make, my
night	right, bright, light
on	an, go, in, Oh, one, no, not
out	but, cat, cut, not, put, you
cook	book, look, take, talk
walk	away, like, milk, wall, take
wash	fish, was, washed, wish, with, which
work	would, word, down, with, wake
went	want, what, wheat, when, with

Such tabulations of children's recognition errors reveal some relationship between the word presented and the word as read by the child. Generally the error results from failure to notice the word's exact appearance and a tendency on the part of the child to ignore minor characteristics of the word. Sometimes the initial letters furnish cues; at other times the final letters seem most prominent to the child. General word length or peculiar letter characteristics, such as double *t*'s in the middle of the word, will at times attract the child's attention. A few errors result from mistaken meanings, such as confusing the word *cat* with *kitten* or substituting *mouse* for *rat* or *bunny* for *rabbit*.

Sometimes the child pays no attention to the word, but notices some other condition which serves as a cue. For example, a child who had successfully read the word *children* on a flash card was unable to read it in a book. He insisted he had never seen the word before. He was presented with the flash card of the word and was asked how he recognized the word as *children*. He replied, "By the smudge over in the corner."

The child who is unfamiliar with the form and names of certain letters will often ignore them in new words. If the child does not know the names of all letters, teaching them will assist him in observation of words. Current practice in the teaching of reading does not require a knowledge of the letters. In remedial work, such knowledge is helpful. However, many recognition exercises in this chapter will aid in observing differences between words of similar appearance, even without a knowledge of the names of letters.

The chief psychological justification for avoiding the teaching of letters before reading is based on the belief that it results in over-analytical word study and slow, laborious word-by-word reading. The same argument is used against word sounding in the regular teaching program. The tendency to over-analysis can be offset by the various quick-



recognition methods described in this chapter. Phrase drills especially will reduce over-analysis, as will many exercises for expression in oral reading. However, in some school systems the anti-phonetic tradition is deeply rooted, and they feel it is unwise to teach letters before reading. Under those conditions other methods of discriminating word differences may be used without resorting to letter naming or word sounding.

#### PREPARING EXERCISES FOR WORD RECOGNITION

In this chapter will be discussed many types of exercises for promoting accuracy, security, and growth in word recognition. These exercises have been tried out in regular classrooms, in remedial classrooms, and in individual tutoring. The teacher should select those most suited to her level of instruction and classroom needs, as indicated by the inventory testing. The sample exercises are intended to serve as patterns rather than to be duplicated for use.

In preparing exercises for drill in word recognition the teacher will find it helpful to bear in mind the following general suggestions:

- a.* So far as possible, the exercises should be self-explanatory; the child should be able to use them without much direction from the teacher. This requires that the directions for the exercises be simple; if an exercise consists of several steps, these should be presented in easy short sentences.
- b.* The material should preferably be planned for repeated use. Time is required for preparing exercise material, and it certainly should not be discarded after a single use unless it has proved to be ineffective. An exercise that may have required an hour or more to develop may be completed by the child in a few minutes. It is sometimes feasible to prepare the exercises in such form that the child's responses are put

on a separate piece of paper and the actual exercise is used with several different children.

- c. Several types of exercises should be prepared for each group of words to be taught in order to avoid monotony in the work, especially when extra practice is needed for slow learners. The child with wandering attention may require several short exercises during the reading period, while a child with greater attentiveness may need only a single exercise.
- d. Exercise material should be filed so that it is easily located and convenient for use. Various types of exercises for each word group may be filed together, so that all material on those words is available together. Words related to a particular story or activity may be grouped together and recognition exercises filed in one envelope. Special lists of troublesome words, such as those beginning with *th* or *wh*, may be put in a special envelope.
- e. Exercises assigned to particular children should be chosen to fit specific needs. The exercises recommended later in this chapter are designed for several purposes: for increasing attention to differences between words, for emphasizing word endings, for increasing perception of words, and for overcoming difficulties common to children at various stages of reading achievement. The child's needs should guide the selection and construction of exercises. Each reading system reveals a certain type of error; the experienced teacher discovers the supplementary materials needed for her particular system.
- f. Eyestrain should be avoided. Common causes of strain are crowding of words in lines or columns, poorly printed exercises, too many exercises on the page, and masses of word lists. Experience with various types of exercises will reveal those tending to confuse a child and to reduce his interest.

- g. The child should be able to follow his progress in word recognition. Each new word learned to the point of recognition should be added to his personal list. Competition between children can be avoided by having these lists kept by the children themselves or by the teacher. The child who sees his own growth and accepts the exercises as designed for his needs has a basis for confidence and security.

### TYPES OF WORD-RECOGNITION EXERCISES

It is difficult and perhaps undesirable to classify the word-recognition exercises presented below, since many of them care for numerous difficulties. But word-recognition exercises can be grouped according to certain main categories, and that has been done for convenience in reference.

### INVENTORY TESTS

Inventory tests should emphasize words that were mastered with but little instruction. After twenty or thirty new words have been taught, each child should be tested on his ability to recognize and pronounce all the words at sight. The words may be presented in a list, or in sentences or paragraphs; the latter procedure is preferable. Duplicate copies of the test material can be used for record blanks. Check all words that cause hesitation or difficulty. Capable children who have passed the test may test the slower ones.

Following is a list of words to be tested, with a paragraph containing them:

cook	country	hang	clothes
stone	afternoon	spend	wear
climb	bother	return	weather
mountain	finish	fire	wouldn't
hike	forget	swim	

Wouldn't you like to go for a hike in the country tomorrow afternoon, if it is good weather? Don't forget to wear your old clothes, so we won't have to bother to hang them up when we go in for a swim. We will build a fire on a large stone and cook our dinner on it. When we finish dinner we can climb the mountain and return before dark.

In preparing inventory paragraphs, previously taught words may also be used. If the words cannot be used in a single story, add the extra ones in other sentences. Note the time required for reading, thus checking each child's improvement as compared with that of the group.

### CONTEXT CUES FOR WORD RECOGNITION

Every child should be able to use the context in word mastery. In many situations the context alone should indicate the word meaning. The following drills, for the daily lesson, should stimulate greater use of the context in mastering words.

Assume, for example, that the words *follow*, *measure*, and *happened* are to be taught. Prepare sentences in which key words may be easily guessed from the context. All words should be known to the child except the words to be learned. The following are sample sentences:

1. The boys could not leave the dog behind. Wherever they went the dog would *follow* them.
2. "I wonder how tall you are. I wish we had a ruler so we could *measure* you."
3. "See all the people running around the corner. What do you think has *happened*?"

The word knowledge gained though such exercises will transfer more completely to regular reading if the sentences used are taken from stories which are to be read. An oral outline of the story will help the pupil correct certain obvious errors. If he knows the story concerns a *horse*,



Words previously taught by various recognition exercises should be typed or printed clearly on cards for the tachistoscope. The shutter should be closed and this direction given: "Watch closely to see whether you can tell what the word is. Ready." Then flash the word quickly. Although the motion of the teacher's hand may be fairly slow, the narrow slot in the shutter passes the opening

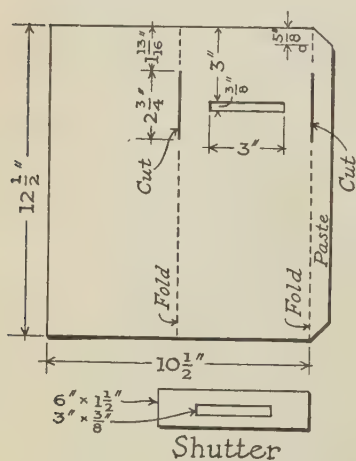


DIAGRAM FOR MAKING PHRASE  
TACHISTOSCOPE

rather rapidly. Proper speed can be developed by moving the shutter up and down ten times in five seconds, the motion for each opening thus requiring approximately one-half second. If the child cannot see the word the first time, he may have a second trial. If he is unable to recognize it on the second trial, open the shutter and let him read it. Then the next word is flashed for recognition in the quick-exposure interval.

The tachistoscope may be used by a pupil-teacher in small-group work, especially if the pupil-teacher has mastered all the words to the point of quick recognition. If the pupil-teacher has not attained complete mastery, he should use the word list concealed from the child taking the test. The pupil-teacher thus knows the word that is coming and if the response is correct can present the next word without checking by opening the shutter.

If a tachistoscope is not available, a slightly slower method for exposing words may be used. Words are typed or printed in columns separated by vertical intervals of about one-half inch. A card is placed over the list and the top



word exposed rapidly and covered again as quickly as possible. After the first word is recognized, the card is slipped down to the next word and the procedure repeated. This device is not so satisfactory as the tachistoscope, but it is superior in individual work to the flash-card presentation commonly used.

### PRACTICE IN PHRASE READING

Many children require help in reading in phrases. Word-recognition exercises often must be followed by practice in phrase perception. Since the need for such exercises is especially important in oral reading, they have been discussed in Chapter 6. However, phrase exercises logically follow the quick-perception practice described in this chapter.

### CORRECTION OF ERRORS ON EASY WORDS

Certain children make mistakes on small, common words which are easily recognized apart from the context. Such errors occur particularly with prepositions, conjunctions, articles, and other words of high frequency, especially when such words appear immediately before or after difficult words. As recognition of the difficult words improves, the errors on the small words disappear. Lack of interest in the material and too rapid reading may account for the difficulties. Phrase-perception exercises are of value in correcting this type of error.

### CORRECTING OMISSION AND ADDITION OF WORDS

Omitting and adding words in reading is sometimes due to poor word recognition, at other times to inattention and lack of interest. Occasionally, such close attention is paid to meaning that words are read into the selection which seem to the pupil to belong there. Phrase exercises will help correct these errors also.

## BASIC READING ABILITIES

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### VISUAL-MOTOR METHODS

Kinesthetic methods are often recommended for children with severe reading difficulties. Usually they involve elaborate exercises and devices, such as tracing; writing in the air with the eyes closed; writing on the blackboard with the eyes closed, as the teacher guides the hand; tracing sandpaper letters and words; and similar dramatic procedures. Such methods may be useful for children with extreme difficulties, but ordinarily they are too time-consuming for the results produced.

The visual-motor methods are sometimes effective for children who fail in word discrimination, reverse letters and letter sequence, or tend to add or omit syllables and sounds. To use these methods, the child must know how to write or print all the letters. Printing or manuscript writing is preferred, since it is similar to the letters used in print; however, any of the regular handwriting systems may also be used.

The visual-motor method may be used with individual pupils or adapted for use with groups. It may be used by pupil-teachers in small-group work, if it has been previously demonstrated by the teacher in the regular class.

The visual-motor method consists of the following steps:

- a. Place the word on a large flash card. Show the word to the children and give this direction: "This word is *from*. Say it aloud. Look at it very carefully. When I turn it down, you are to write it as fast as you can. Look carefully and be sure to get it just right. Ready." Then turn the card down quickly and have the children write the word from memory.
- b. After the children have written the word, show the card again and say: "Look! Is your word just like that?"
- c. Have the child cover the word he has written and then say: "Now here is the word again. What is it?"

Yes, that's right. When I turn it down, write it again as fast as you can. Ready." Turn the word down. Check as before to see that the word is correct. Then present the next word.

In this method, the first words shown should be short words containing elements that commonly appear in other words. Word elements which can already be written easily help in learning new words which contain those elements. Thus the word *information* will be relatively simple if the elements *inform* and *tion* can be written.

Some variations of the visual-motor method follow:

- a. Words may be shown on lantern slides rather than on flash cards.<sup>8</sup>
- b. For advanced or extremely rapid learners words may be presented in the tachistoscope with an instantaneous flash.
- c. Children may write words three or four times without seeing the flash card, covering their previous writings to insure use of memory rather than automatic copying.
- d. After two or three words have been thus taught, they may be dictated in a short sentence which also includes words previously taught.
- e. Children with marked difficulty in remembering the visual appearance of words may receive preparatory drill in copying the word directly from print. In this way they acquire an impression of the general shape of the word.
- f. Use of a typewriter often helps the child who writes slowly. When the typewriter is used, the child should be given instruction on the keyboard, so that he becomes familiar with the location of the letters.

While it is not necessary to teach the touch system of

<sup>8</sup> The Flash-Meter which is used with a lantern-slide projector may be obtained from the Keystone View Company, Meadville, Pennsylvania.

typing, the child should use the correct fingers for various letters. Haefner's *Ted and Polly*<sup>9</sup> will be found helpful if the typewriter is used.

Teachers who have not used visual-motor methods should not hesitate to try them. They have been successfully used for a long time in some schools. The written-language approach to reading, involving the writing of words before reading them, has been practiced for more than twenty years in the Henry Barnard School in Providence, Rhode Island. Writing of words prior to reading is part of the Calvert system, a correspondence course for children. It is a common observation that young children desire to write long before they desire to read. They prefer the real activity of writing and copying to the prosaic finding of names for strange scrawls called printed words, written by someone else. To the young child a written word is merely a series of ink marks on paper. Visual-motor methods do not work miracles, but they do increase attention to word forms and serve to vary regular methods of word presentation.

### SAMPLES OF OTHER WORD-RECOGNITION DRILLS AND DEVICES

The following exercises may be used either for group work or for individual tutoring. They are difficult to classify, for they are intended to serve several purposes. Some emphasize meaning, others deal with perception skills, while still others involve various psychological factors.

1. *Word-matching exercise based on a picture dictionary.* This is the simplest exercise. The procedure in exercises of this type is as follows: The child has a large card on which appear pictures with words underneath them. He is given tiny cards with the same words on them. He

<sup>9</sup> Haefner, Ralph. *Ted and Polly: A Home Typing Book for Younger Children.* The Macmillan Company, New York; 1933.

studies the pictures along the top of the large card and matches his small word card with the picture it represents. He then puts the card beneath the correct picture. This exercise helps the child to notice all the letters, since he pronounces each word as he puts it in place. Colors, in place of pictures, may be used to teach color names.

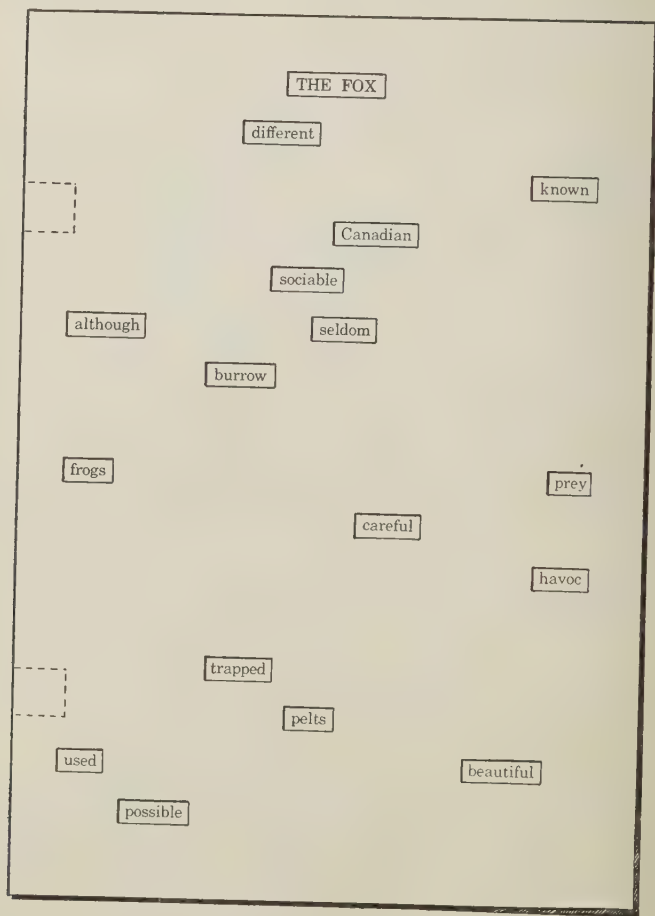
2. *The word-picture game.* The procedure is as follows: Arrange pictures representing certain words, either in rows or at random on a 9" by 12" card. Under each picture draw a box  $\frac{1}{2}$ " by  $1\frac{1}{2}$ ". Prepare cards of the same dimensions as the boxes and on them print the words represented by the pictures. Put these word cards in an envelope together with two or three extra ones for which there are no pictures. Clip the envelope to the picture card. On the reverse side of each picture card may be written the names of the children who have performed the exercise correctly. The teacher can thus check progress quickly and easily.

3. *Picture and word cards.* On cards measuring 4" by 6", six pictures representing objects such as a gray cat, a turkey, a boy fishing, a rabbit, a garden, or a school, are pasted. Several words related to each picture are printed on cards 1" by 3", such as: (one word on a card)

milk	gobble	brook	carrots	flowers	children
kitten	feathers	line	bunny	watering	rooms
gray	Thanksgiving	pole	eating	lead	books
saucer	dinner	worms	pink	hose	paper
purr	bird	catch	white	plants	pencil

A few extra word cards are provided with words such as *talk*, *kitchen*, *camel*, etc. Shuffle the cards. Have the children separate them quickly, placing each card with the picture it matches.

4. *Using a mask.* Cut from a discarded book the page which is to be used as a sample. Cut a piece of paper to fit the page. Hinge the paper with mending tissue or



MASK FOR WORD-RECOGNITION DRILL

gummed labels to the side of the page, so that it will turn back readily without bending the page. Hold both the page and the attached paper against a window and draw little boxes on the paper around difficult words for pre-teaching. Cut out the boxes, so as to expose the words



and leave the remainder of the text covered as shown in the diagram on page 184.

The new words thus selected are taught and the meaning enriched by use of the regular methods suggested. Then present to the pupil the sheet with only the newly taught words showing. Have them pronounced. Turn the mask back, exposing the full page. Have the child read the page.

5. *Word-enrichment drill.* Pictures are chosen to illustrate different meanings of certain words. The pictures are mounted on 9" by 12" cards and beneath each is written a descriptive sentence containing the word illustrated. The teacher holds each picture before the class and discusses its meaning. The child thus learns to recognize the word and apply its meaning at the same time. The following illustrates the procedure:

Picture of a train of cars (streamlined).

"Here is a streamlined *train*."

Picture of a boy training his dog.

"See John *train* his dog."

Picture of a bride in wedding dress.

"The lady has a *train* on her dress."

6. *Picture identification.* Paste a 6" by 9" picture on a 9" by 12" sheet of colored paper. On white paper type three columns of words, *all* of which the children know. Several words in each column should be related to the picture; the others are non-stimulus words. Number the words. Paste the list of words under the picture. Each pupil divides a sheet of paper into three columns. He is shown the picture with the word lists and told to write the numbers of the words in each column which he sees in the picture.

This exercise is designed to test ability to follow directions, as well as to recognize words which refer to the picture. Simple directions may be typed on the sheet, enabling the children to perform the exercise independently.

7. *Word discrimination.* Words that are similar in appearance are typed in a row across a sheet of paper. The rows are labeled with letters, while the words are numbered, as for example:

- |                |            |              |              |
|----------------|------------|--------------|--------------|
| A. 1. per cent | 2. perfect | 3. permanent | 4. pertinent |
| B. 1. design   | 2. desire  | 3. despise   | 4. despair   |

The teacher has a list of the words; the children have slips of paper. The children write the number of the word in each line as the teacher pronounces it. For example, the teacher says, "Line A, *permanent*." The child writes (3). The teacher says, "Line B, *design*." The child writes (1).

8. *Wordo, an adaptation of Bingo.* Cut cards 7½" by 6". Consider the 7½" sides the top and bottom of a card, and draw a line across the top 1" from edge. Rule the card into five columns, each 1½" wide, extending from the line at the top of the card to the bottom. Then divide the card into five rows, each 1" high, starting at the bottom of the card. Type selected words in the spaces formed by the vertical and the horizontal lines as on a Bingo card. Two cards are illustrated on page 187.

Rule several cards and on them type the same words, varying the order so that no two cards will have any identical columns or rows of words. The same words are typed on a number of small cards, and as the teacher reads the word on a small card, the children cover that word on their large cards (they may use paper circles, if wooden counters are lacking).

The child wins who first covers five words horizontally, vertically, or diagonally. Any number of sets of words may be practiced for quick recognition. One child may play with the teacher, although the game is better when several are playing.

9. *The tachistoscope.* Words to be tested for recognition are printed on cards. The rapidly moving shutter al-

W	O	R	D	O
were	they	there	want	them
that	which	the	why	then
with	what	Free center	went	this
those	will	while	whose	when
where	white	tell	wind	wall

W	O	R	D	O
them	want	they	there	were
why	that	which	then	the
this	with	Free center	what	went
when	those	will	while	whose
wall	where	wind	white	tell

lows only a quick glance at each word. Usually a word is not claimed for the child's sight vocabulary until recognized at a glance. All the words previously taught in analysis drills should be presented in this rapid-flash device to insure transfer of skills. Pupil-teachers may be taught to use the apparatus for group instruction.

10. *Story method for review.* A new story is presented on the difficulty level of material in the basal reader. Most of the vocabulary will already have been studied. A few new words related to those taught may be included, to test analysis skills. Review words are put into the tachistoscope and flashed for quick recognition; words from the new story are flashed in phrases; finally the child is given the card with the new paragraph. He should read it rapidly and smoothly.

Several stories on the same level, but with different content, may be written to provide additional practice. These stories should be pasted on strong cardboard. They may be made more interesting by use of illustrations and colored cardboard. The teacher should prepare a few of these stories at a time and file them. On a slip pasted lightly on the back of each story she may keep the names of children who have read it. A check on the child's reading is thus provided. When one group has completed them, the paper may be removed and the cards filed away for the next group. Cards for various vocabulary levels may be differentiated by color. This enables the teacher to sort them easily and to discover on what level the child is reading.

11. *Tachistoscopic drill with small words.* Prepare word cards containing little words, such as *if, it, on, no, to, is, in*. Some children recognize long words quickly, but have difficulty with short words. Often these short words occur together in phrases and result in choppy, irregular reading. Practice on such phrases as *it is on the, if it is in, for it is the, up on the top*, results in smoother reading.

These phrases are presented in the tachistoscope in the same manner as are words.

12. *Multiple-choice method.* Prepare large flash cards, each containing a word to be taught. Prepare and duplicate lines of words similar to those to be taught, such as the following:

clear.....clean.....close.....lose.....lean.....chose  
blank.....black.....dark.....clock.....black.....drink  
recognition.....radiation.....registration.....reputation  
undaunted.....undecided.....undesired.....unbridled

Show the large flash card for one word, such as *chose*. The teacher says, "This word is *chose*." The group pronounces the word. The teacher repeats the word, then turns down the card. Each child finds the word on the first line on his paper, and draws a ring around it. The other words are presented in the same manner. Have children exchange papers and check incorrect answers as the flash cards are shown again.

A number of variations of this method can be used. Two key words are placed in a row. Variant forms of the same word are placed in a line. It should be emphasized that the flash card is turned down before the child is allowed to hunt for the word. The words to be circled should fall in different places in the rows.

13. *Flash-card drill.* Make large flash cards for the words to be taught. Show the flash card, pronounce the word, and enrich it through any of the suggested methods. Have the children look at the word carefully as they pronounce it. Place the word before the class, on the chalk tray or other convenient place. Make certain each child can read all new words. Type paragraphs containing the words just taught. Hand a copy to each child to read.

When flash cards are used in word-recognition exercises, it is essential that words taught be transferred to print im-

mediately. A child may recognize a word on a flash card and still not know it in print. Reading short paragraphs insures transfer of words from the flash cards to close work.

14. *Sentence-analysis method.* A sentence, each word of which occupies a separate flash card, is placed on the chalk tray. All the children read the sentence. Each child points to a card, pronouncing the word at the same time. The teacher places the words in random order. Each child then picks up a card and reads the word. New sentences may be framed with the same words.

Words and sentences may be printed or written on the blackboard instead of on cards and the pointer used to indicate individual words to be read.

15. *Lantern-slide methods.* Prepare lantern slides with words printed on etched glass or on cellophane masks between glass slides. Show each word on the screen or wall, pronounce it, enrich it through any of the suggested methods, and have the children pronounce it. Among the new words intersperse old ones needing review. Present new words several times during the lesson. Do not teach more new words at one time than the child can master. Provide for immediate use of the words by a slide or sheets with sentences or paragraphs.

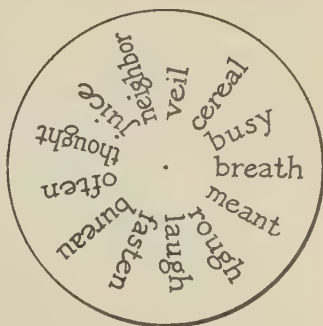
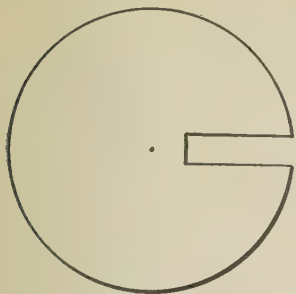
16. *Word-meaning exercise.* Paste a picture on a card. Beneath it type a short descriptive story. In an envelope place a 3" by 4" card with seven or eight typed questions based on the story. Phrase these questions so that the child must know the word meanings to answer them correctly, such as:

Which word tells what the mother is doing?

Which word tells what was happening to Sam?

On a second card make a list of words which are synonyms of those in the story. Have the child copy the words which answer the questions. The words on which the children fail should be discussed and enriched.





A word wheel is easily made of two disks cut from oak tag. Selected words are lettered on one disk and a slot is cut in the other as shown above. The two are fastened together at the center so they will revolve and one word at a time be exposed through the slot as shown below.



17. *Word wheel for teaching non-phonetic words.*

This simple device aids retention of non-phonetic words which must be memorized.

After the child has learned the words and can say them as the wheel revolves, he is allowed to spin the circle and pronounce the words as a review drill.

18. *Word-discrimination exercises.* Most of the recognition exercises described in this chapter help in understanding the forms of words and the differences between them. There are, however, some children who require specific drill on word and letter forms. Word-and-letter-matching exercises ordinarily demand no reading, but mere matching of words, letters, or word parts. They have no reading value, being designed merely to teach differences in the visual form of words. Such exercises aid in the discrimination of letters and simple words prior to actual reading. Samples are given on the next two pages.

- a. Provide two sets of the same words on slips of paper or oak tag and have pupils match them. Give only a few pairs at once, to avoid waste of time in handling the material. Ordinarily six or seven pairs will be sufficient for matching exercises. This drill may be varied in many ways. Print a sentence on the blackboard and give the children small word cards to arrange to form the sentence. Sentences may be similar to those in a book. Words may be printed on small slips in the order of the blackboard list.
- b. Prepare word lists similar to the following:

came	word
chair	came
word	draw
make	chair
draw	make

The child draws a line from the word in the first column to the same word in the second column. Or the words in the first column may be designated with capital letters, while those in the second column may be numbered. The child then writes the exercise on a piece of paper, putting down the letters of the words in the first column and places opposite these letters the matching numbers of the words in the second column. This arrangement makes possible repeated use of the material. This exercise can be used on the blackboard or lantern slide, the child indicating his responses on paper.

The difficulty of exercises of this type may be increased by using words similar in form, as below:

A. pint	1. paint
B. paint	2. pant
C. point	3. pint
D. pant	4. part
E. part	5. point

Such exercises may use letters of similar form, such as *b, d, p*, and *u, h, m, n, r*, which the child ordinarily confuses. In other lists one column may contain consonant blends or phonograms, while the second column consists of words containing these phonograms or blends. This exercise calls attention to particular parts of words.

Exercises combining visual discrimination with ear training will be found in Chapter 9 on word analysis.

### INDIVIDUAL DEVICES

Many types of flash devices may be made for capturing the interests of children with aversions to reading due to previous failures.

1. *Individual word books or picture dictionaries.* Word books or picture dictionaries are used in many classrooms. There are two types of books which are effective in the improvement of sight vocabulary. In the first type of book, the child lists all the words which he does not know. For these words he finds pictures to match. In the other type of book the child collects pictures of words which he knows. The work can be motivated by use of a typewriter or printing press to prepare the words for the books. As the words are learned by quick-flash devices, they are transferred to the second book. As learning continues, the sheets are removed from the first book and the number of words still to be learned decreases. All words in the second book should be reviewed at intervals, to assure retention of the sight vocabulary.

2. *Football game.* Cut a football shape,  $6\frac{1}{2}$ " by  $9\frac{1}{2}$ ", from brown paper. Draw the lacing and stitching with black crayon. Cut a slit in the long side 5" from the top. Paste a 4" by 6" card on the back, fastening down only the ends, leaving the center, the top, and the bottom free. (See diagram on next page.)

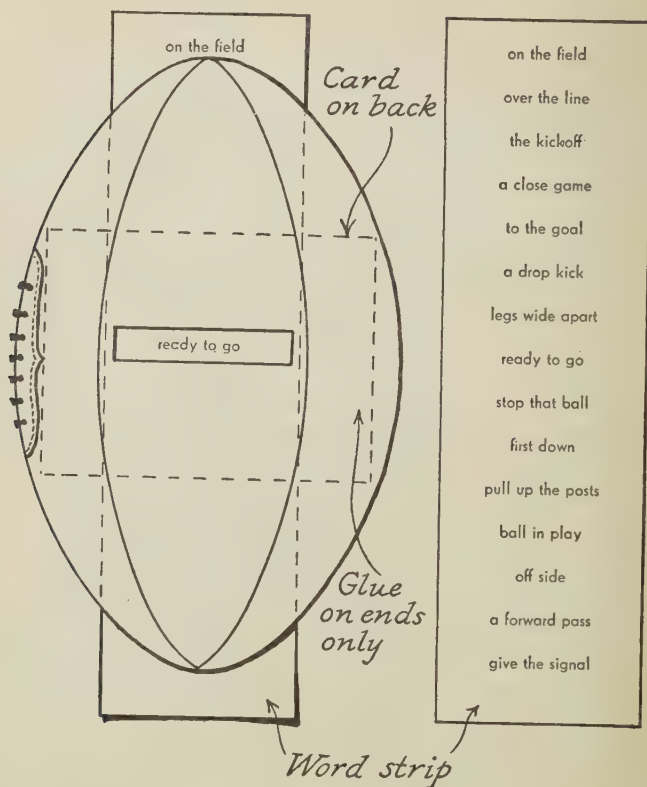


DIAGRAM FOR FOOTBALL DEVICE

Make word cards similar to those for the tachistoscope. On these type the football terms and paragraphs from a story. As the child moves the card past the opening in the football, he finally reads a whole paragraph in sequence. This type of drill often works when more formal ones fail. In place of the football any article in which the child shows an interest may be used. Engines, airplanes, or steamers may be cut from magazines for this purpose. The device is often worth the short time needed to prepare it.

Many children enjoy preparing their own. Similar devices may represent Santa Claus, George Washington, Lincoln, a log cabin, a flag, a heart, etc., depending on the content of the story.

3. *Mailbox game.* This device provides motivation for children who are easily bored. Obtain a small jewelry box. Paste a piece of colored paper over the top and make a slit in this. Print "DEAD LETTER OFFICE" on the box.

Draw a mailbox, 6" by 9", on green paper. Make a slit for the letters. On the back paste a small paper candy bag cut to fit. The bag has expanding sides which will push out and hold many words. Make a post for the box out of strips of cardboard. Paste a support on the back of the box to hold it up.

Put in an envelope the words to be mastered. The three pieces should be kept in a large envelope.

The child puts the letters or words being taught on the desk. The tutor allows him to drop into the mailbox all the words he knows. These are later sent to some other child for study. The words he does not know go into the Dead Letter Office and are returned to him. Small children are especially fond of this game.

When the game is over, the child takes the letters from the Dead Letter Office and the teacher reviews them with him. Words from the Dead Letter Office are put in a separate envelope in the large envelope. The next word lesson begins with these. Then they are mixed with the other words, go back in the mailbox, and later appear again.

### REFERENCES

Few authors consider separately word meaning, word recognition, and word analysis. The following references deal primarily with word-recognition exercises, although meaning is emphasized in all of them.

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## CHAPTER 9

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### WORD ANALYSIS

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THERE has been a marked change in teaching practice during the past ten years in the emphasis accorded to word analysis as a method or self-help device by which the child can solve and master new words. The elaborate method of sounding word elements by phonetic groups often resulted in slow word-by-word reading. The newer reading methods have attempted to correct this over-stressing of word elements by dropping entirely the sounding of words and replacing it with word-comparison methods, or "intrinsic" phonics. In many quarters this has led to the belief that word analysis should be abandoned entirely. But lack of attention to word analysis produces its characteristic error — guessing at words without regard to word form or to the context of the story.

Of one hundred children with severe reading difficulties who attended the Boston University Educational Clinic in 1930, ninety showed the result of over-intensive work in phonics. Those children came from school systems that were then using reading methods in which the direct sounding of phonics was an important element. The children needed help in quick recognition of words and phrases, in ear training to enable them to synthesize sounds, and in word analysis in which syllables and word parts were emphasized. Six years later these same school systems had changed to newer reading methods in which word comparison was utilized in phonics. Then, of the pupils from those schools who were sent to the Boston University Educational Clinic, 90 per cent were so weak in word analysis that they were unable to discriminate words of

similar form, they guessed at words in an aimless fashion, or they were unable to make any attempt at word analysis. Those children improved rapidly in their reading when word-analysis instruction was given.

There is ample evidence, in addition to that just cited, to indicate the need for instruction in word analysis. Such evidence includes the complete inability of some children to solve new words, random guessing at new words without regard to word form or meaning, and various ineffective habits of attack on new words, such as mere sounding by letters and syllables. Some bright children may acquire the facility to notice the visual and auditory elements of words and hence need no formal instruction in word analysis. The majority of children, however, are aided by special practice to increase the accuracy and fluency of both visual and auditory perception of word elements.

### GENERAL CONSIDERATIONS IN WORD ANALYSIS

There are many levels and types of word analysis and many different methods of approach in teaching the skills involved. A complete program would include ear training to give the child skill in attending to the auditory elements of words, visual training for recognition of the visual elements that accompany word sounds, and, above all, provision for independent use of the skills. It is not enough for a pupil to be able to know the sounds of the various elements of words or to recognize them when he hears them or sees them in words. One of the greatest weaknesses of the old family system of phonics was that while the child was able to sound each word element he was unable to apply his skill successfully in solving new words that he encountered. After any exercise designed to teach the child the recognition of word elements, lessons should be provided for applying the skill in the independent solution of new words. In test-

ing whether a child has acquired an adequate knowledge of any word element, it is essential to discover whether or not he can actually use it in solving a word.

For practice in word analysis no word should be included unless it is already in the child's hearing and speaking vocabulary. Otherwise the child has only a meaningless combination of sounds as a result of his word study. The following words taken from a list of phonic drills designed for remedial work indicate the mistake to be avoided: *fob*, *bag*, *fem*, *mid*, *tug*, *cud*, *sup*, *lop*, *jet*, *glay*, *mart*, *deem*, *gush*, *rood*, *boon*, *moor*, *vouch*. It is the presence of such words as these in word-analysis exercises that makes instruction meaningless and fruitless. Generally the teacher will know the words that have meaning for her children. Preferably the words chosen for work in analysis should appear in the day's lesson or in future lessons in the child's reading. Writers of children's readers regularly employ words commonly in the speaking or hearing vocabularies of children, and vocabulary lists accompanying primary readers may be consulted for suitable words. Such published lists of children's vocabularies as that of the International Kindergarten Union and the Buckingham-Dolch Word List are also valuable sources. While Thorndike's *Teacher's Word Book* gives the frequency of words in adult literature, there is no assurance that the words appearing at any level in the list are known to children. The vocabulary lists in the Appendix of this volume will be suitable for determining whether or not the words are to appear frequently in the child's later school reading.

It is desirable to delay instruction in word analysis until the child has acquired a sight vocabulary of seventy-five to one hundred words. This will permit him to experience the pleasure of connected reading and to understand the purposes and products of reading instruction. It will also make the administration of the exercises much easier, since the child will then be able to read some of the instructions

for himself. His sight vocabulary will also provide a basis for much of the ear training and training in visual discrimination of word forms. However, there are several background skills of value to the child in word recognition, which may be taught even before the child enters school. These include the names of letters, ear-training exercises, and some simple writing.

Word analysis is an aggregate of transfer skills to be applied in reading as the need arises. Moreover, there are graded steps in acquisition of the several skills, and certain levels of proficiency should be attained in different grades as the child progresses in his reading ability and finds new needs for analysis. There is often no relationship between the word-analysis exercises and the reading lesson of the day. Since the reading period is devoted primarily to helping the child derive pleasure and meaning from the reading material, and since word-analysis exercises are designed primarily to call attention to word structures rather than to word meanings, it is important that there be a separate period for this work. Word analysis may in fact be closely allied to spelling, and many teachers find that exercises in word analysis may be given more profitably in connection with spelling lessons than with reading.

### WORD ELEMENTS AND THEIR FREQUENCY IN PRIMARY GRADES

The specific word-analysis skills to be taught depend on the word elements that the child is likely to use in his later reading. The basal reading system often includes a list of the phonetic elements to be mastered during each semester of the primary grades, as well as skills to be taught in the intermediate grades. The lists which appear below include those which are commonly found to be most frequent in the various stages of reading. Only the most

essential blends and phonograms should be taught and those only in words which have meaning for the child.

#### PREFIXES AND SUFFIXES

There are a few prefixes and suffixes which are common to the vocabularies of the various grade levels, judged by a study of primary readers and vocabulary lists. These are listed below so that the teacher may include them when planning words for recognition and ear training. Only those most common to the grade should be taught.

	PREFIXES	SUFFIXES
<i>Grade I</i>		
	Requires no work with prefixes	s, es, ed, ing, y
<i>Grade II</i>		
	con, ex, in, en, el, up, de	ly, ty, er, est, ion
<i>Grade III</i>		
	re, di, bi, be, per, any, un, for, el	ily, ier, iest, ant, ous, ious, ent

#### INITIAL AND FINAL BLENDS

Among initial sounds and blends<sup>1</sup> the following are essential: *th, st, wh, sh, br, ch, dr, tr, cl, fr, gr, pl, sm, tw, fl, sw, sp*. The following blends are found commonly as endings of words in the vocabulary of children in the primary grades: *sh, ch, al, on, ck, ly, nk, lk, by, nt, rk, se, ty*.

#### COMMON PHONOGRAMS

The following is a list of phonograms that occur most often in the several primary grades and so will serve as a basis for reference in conducting work in analysis:

<sup>1</sup> Although *th, sh*, and *ch* are single sounds and not blends they are not listed separately, since the visual-perception difficulty which is considered here is the same for all two-letter and three-letter combinations.

## BASIC READING ABILITIES

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### Grade I

in, and, ike, is, ake, oke, ook, own, ed, oy, ay, as, ed, ig, ouse, at, an, un, am, it, ome, ack, ank, ut, un, ell, all, ill, ame, og, ee, up, id, ool, en, oll, ot, op, ap, ing, ow

### Grade II

uit, ue, eet, ive, oom, op, oot, unk, ight, eep, ich, ore, ent, oss, uy, ilk, ead, ease, om, ass, eat, ith, orse, out, arn, rd, ern, our, eak, ink, alk, arm, ove, oar, ick, ile, old, aid, int, ood

### Grade III

onk, een, ought, igh, tion, atch, itch, ob, ix, eel, eek, ush, tch, eeck, orn, eah, eal, oach, oast, ound, ut, ough, age, oil, ure

## WORD ANALYSIS IN THE INTERMEDIATE GRADES

Instruction in word analysis should be continued in the intermediate grades. Children should be taught to recognize similarities and differences in word parts. It is desirable at the intermediate level to analyze words only in syllables or larger units. Lists of the more common prefixes, suffixes, and word roots commonly found among intermediate-grade words were derived from the Durrell-Sullivan Reading Vocabulary for the Intermediate Grades, which may be found in the Appendix.<sup>2</sup> Those lists are given below.

### PREFIXES

In order of frequency, occurring two or more times in the Intermediate Grade Vocabulary:

re, in, con, de, dis, com, un, ex, im, pro, ob, per, e, pre, en, ac, ad, em, up, be, ab, sur, ap, of, under, sub, trans, sup, a, pur, oc, for, fore, extra, af

<sup>2</sup>For a comparison of this list with other word lists, see: Durrell, Donald D., and Sullivan, Helen Blair, "Vocabulary Instruction in the Intermediate Grades," *Elementary English Review*, Vol. 15 (April and May, 1938), pages 138-145, 185-198.



## SUFFIXES

In order of frequency, occurring three or more times in the Intermediate Grade Vocabulary:

tion, ate, er, al, ic(s), ous, y, ious, ure, ive, ant, ent, or, ish, ment, ice, age, ize, sion, ance, ary, ful, ist, ible, able, ine, less, ly, ry, ty, ar, cy, en, fy, ial, let, eous, ion, ium, ling, ory

## WORD ROOTS

In order of frequency, occurring three or more times in the Intermediate Grade Vocabulary:

$\left. \begin{matrix} v \\ -mot \end{matrix} \right\} -$ ,  $-nat-$ ,  $-port-$ ,  $\left. \begin{matrix} d \\ -jur \\ s \end{matrix} \right\} -$ ,  $-serve-$ ,  $-act-$ ,  
 $\left. \begin{matrix} u \\ -solv \end{matrix} \right\} -$ ,  $-tain-$ ,  $-vent-$ ,  $-ceive-$ ,  $-fort-$ ,  $-hab-$ ,  
 $-ject-$ ,  $-part-$ ,  $-tend-$ ,  $-val-$ ,  $-vert-$ ,  $-alter-$ ,  $-cert-$ ,  
 $-duc-$ ,  $-gen-$ ,  $-graph-$ ,  $-labor-$ ,  $-lect-$ ,  $-leg-$ ,  
 $-merge-$ ,  $-mort-$ ,  $-not-$ ,  $-nor-$ ,  $-pend-$ ,  $-rect-$ ,  
 $-sci-$ ,  $-scribe-$ ,  $-sent-$ ,  $-set-$ ,  $-sign-$ ,  $-spect-$ ,  
 $-stance-$ ,  $-terr-$ ,  $-turb-$ ,  $-viv-$

## SUGGESTED EXERCISES IN WORD ANALYSIS

The exercises described in this chapter are those which have been found most suitable in developing word-analysis skills and in correcting common difficulties. The exercises are presented in the order which is usual for the child who has no facility whatever in word-mastery skills.

## LEARNING THE LETTERS

If a child has difficulty in recognizing the individual letters, he is likely to confuse words in which these letters ap-

pear. The following exercises are designed to aid the child in learning the names or sounds of letters.

Present the lower-case (small) letters on separate cards, or several in random order on a single card. Point to the letter, give its name, and have the child tell its name. Have him pick out the letters in words and name them as he finds them. Only three or four letters should be taught at a time, and there should be provision for prompt review of the letters at each lesson. The rate of introduction of new words depends upon the speed with which the child can learn them with security. Teach first the letters that are easy to remember and simple to make; namely, *a, c, o, f, e, i, l, r*. Then follow with *d, s, b, k, t, u*. The next group normally to be taught is *b, m, n, v, w, x*, and *z*. The last group to be taught is *g, j, p, q*, and *y*. Many of the games and devices which appear in this chapter may be adapted to teaching letter names.

After a child has learned the name of a letter, he should learn how to write it. Show the child the letter, tell him its name, have him say it, then have him copy it. This copy may be in print or script. In the earlier stages of learning, the child should always say the letter while he is copying it or writing it. If a child has difficulty in printing or writing a letter, assistance should be given him. This may take the form of guiding his hand through the letter movements, of having him trace a model of the letter, or of having him imitate the hand movements as the teacher writes a large copy of the letter slowly. The writing may be done on the blackboard or on paper. Make sure that the child's method is a correct one and that he uses the same movement each time he writes the letter. Manuscript writing — i.e., printing — is usually preferred, since it is more like print, but there is no serious objection to the use of script. When the child is able to copy a letter accurately, he may write it from a flash-card presentation or from dictation without a copy before him.

Skill in naming and in writing letters is often a sufficient background for the word recognition. However, many children fail to develop the ability to analyze words independently without first learning the sounds through some ear training.

#### EAR TRAINING

A child will increase his rate of learning new words and will have greater security in his retention of words learned if he has given attention to the sound elements of the words. After a child has learned to read the words *make*, *take*, and *cake*, he will learn the word *lake* more quickly, but only if he has noticed that the sound *ake* is an element of all four words. A child may have an extensive speaking vocabulary but may never have noticed that words contain sounds; many children have never noticed the phonetic structure of words. Inability to recognize sounds within words probably accounts for children's failure to make progress in word mastery with the older phonic methods.

Ear training is essential to all work in beginning reading. Unless it is given by direct instruction or acquired naturally by the child outside the school, the child will have difficulty in learning and remembering words in print. Ear training is particularly important when word-matching or intrinsic word-analysis methods are used, because these depend so largely on a child's noticing the sound elements of words while reading the words as wholes.

Ability to identify sound elements is also valuable in spelling, since it enables the child not only to write the letters from the sound of a word, but also to notice whether he is omitting or adding essential sounds or syllables. However, since the English language contains a great number of non-phonetic words, the child must be taught to rely finally upon visual memory of words rather than upon sounds. He should not be led to expect that sound-

ing will be an adequate method of solving all his reading and spelling difficulties.

*Initial consonants.* In any ear-training program the initial consonant is to be taught first. Initial consonants most often give the child the cue for recognizing words. Also if he notices the sound of the first letter or letters, many types of pronunciation errors will be avoided. Consonant blends are somewhat more difficult than single-letter sounds. Blends of two sounds, of course, are easier than blends of three sounds, and this must be taken into account in the order of presentation.

The sounds of the letters *f, b, g, c, h, l, and m* are the best ones with which to start ear training, as the lip movements are distinct and the sounds are easily noticed by the pupils. If the work is being done in the first grade, only four or five letters a week should be introduced, accompanied by sufficient practice to insure retention. Older children will learn the sounds more quickly. Often the children who first begin sounding as part of a remedial program in third and fourth grades will master all the needed initial consonants in a week. The sounds are usually presented as outlined below.

- a. Ask the pupils to listen carefully while you pronounce the words *feet, feel, face, fun*. Tell the children that these words begin with the *letter f*. Do not mention the sound, simply name the letter. The pupils will gradually associate the sound with the name.
- b. Have the pupils pronounce the words after you. Tell them to think about the way their lips and tongue feel as they say the word. Say, "Here are some more words which begin with the same letter — *fall, fish, fan, farm*."
- c. Ask the children in the group to think of some words for you which they think would begin with the same letter. In this way the teacher can readily see

whether the children understand the exercise, and can help any who do not.

- d. Provide review work each day on the letters which were learned the day before. Usually it is enough to have the members of the group give orally a few words beginning with each letter so that the teacher may discover which ones need more help.

*Initial blends.* After the pupils are to some degree familiar with initial consonant sounds, there should be somewhat similar practice on initial blends. The teacher will say: "Now listen and see if you can hear the first sound in these words, *chicken*, *chilly*, *cheese*, *chop*. The first two letters have this sound; they are *ch*. How many of you can think of a word that begins with *ch*?" The teacher repeats all the words the children give with the *ch* sound. All the beginning blends may be taught in this way, and the order of presentation is suggested earlier in this chapter. It is necessary to provide for review and practice each day by asking the children to name words that begin with *ch*. As the list of blends which the children have learned increases, the teacher can vary the exercise by letting children draw from a box cards on which are typed words beginning with blends they should know. The child who draws the card gives another word beginning with the same blend as the word he draws.

As soon as the pupils are able to get the initial two-letter blends easily, work may be given on the three-letter blends with such words as *string*, *sprain*, *thrill*, *spruce*, *thrash*, and *strap*.

*Final blends.* In developing discrimination of final blends of word endings and suffixes, the teacher will pronounce such words as *wash*, *dish*, *flash*, *fresh*. Usually by the time this step is reached the child will be able to tell almost immediately what the last two letters are. In such an exercise he simply listens for the sounds already known but in the

new position. The child is asked to give words ending in the same letters as those pronounced by the teacher. As the children increase their knowledge of final blends, the teacher may use games for practice and review. Samples of these are included later in this chapter under exercises and drills for word analysis.

### COMBINING VISUAL AND AUDITORY ANALYSIS

After a child has learned to identify sounds within words, he is ready for specific practice in associating these sounds with their visual form. While most adults are able to visualize fairly accurately the new words that they hear, children often require training for this skill. The sequence of exercises outlined below illustrates the method of teaching the child to associate sound elements with the visual form of a word. The method is that of observing the sounds in *whole words* known to the child rather than matching a sound with isolated word elements.

- a. The teacher writes on the board the word *fill*, the sounds of which the children should know from their previous ear training. Ask the pupils to give other words they think rhyme with *fill*, such as *spill*, *hill*, *pill*. In this way the teacher will get only words in the family which are within the speaking vocabulary of the children. Write these words on the blackboard as the children give them so that they may see the words.
- b. Ask a child to go to the blackboard and put a circle around the parts in each word which are alike. This is to make the group conscious of the similarity in the words.
- c. Change *fill* to *fell* on the board and show that a change in one letter changes the sound. Have pupils go to the board and write rhyming words, such as *spell*,



- shell, bell, sell.* Have them circle the part that looks the same in all the words.
- d. Ask the children to shut their eyes and try to "see" the word *tell*. Write the word on the blackboard and ask, "How many saw the word correctly?" Try this with several words until most of the group have no difficulty.
  - e. Change *fell* to *fall, ball, tall*, etc., using the same procedure described above.
  - f. For practice, first erase from the board all the words used in presentation. Then write a number of *ills* and *ells* on the board in random order and ask different pupils to go to the board and complete words they think of, such as *shell, still, ball, frill, hall, wall, stall, chill, bell*.
  - g. Review these groups at the beginning of the word work the next day.

#### QUICK-FLASH PRESENTATION OF WORDS STUDIED

To offset the tendency to show visual analysis induced by the foregoing methods, most of the words should be presented in a tachistoscope or other quick-flash device for sight recognition. Attention should be drawn to meaning by statements or questions relevant to the word; for example:

- |   |               |
|---|---------------|
| This word tells the color of the cat.             | <i>black</i>  |
| The day was damp and                              | <i>chilly</i> |
| What did the boy have around his bundle of books? | <i>strap</i>  |
| The boy could <i>feel</i> the cold wind.          |               |

All words used in the analysis exercises need not be flashed. Choose those that are most likely to appear in children's stories. The main purpose is to keep meaning and quick perception foremost in the child's mind.

### PROVISION FOR SOLVING NEW WORDS IN CONTEXT

To give practice in applying the skills of analysis, words made up of elements which have been presented in the analysis exercises should be embodied in a printed or written paragraph. The child reads the paragraph, solving the new words independently. This experience will bring out the immediate usefulness of the ability the child has developed. The following paragraph assumes that the child has been taught the word elements necessary to recognize the words *train*, *track*, *jump*, *bump*, *truck*, and *just*.

The train was coming fast. A car was standing on the track. Before the man could jump out of the car, he felt a bump. It was a big truck, which pushed his car out of the way just in time.

### A SAMPLE UNIT IN WORD ANALYSIS

The following is included as a guide in following the various steps of the word-analysis procedure. It is not necessary to spend an equal amount of time with all children on the drills. Some children get the idea and so make the necessary transfer quickly; others, with either low auditory or visual perception, need more time. It is essential that the teacher assure herself that each child does have a key to the sounds and blends, but that this skill is developed to the state where it is of value to him and not a hindrance. Because of this ability he should be able to read rapidly and smoothly without stopping to analyze words. This is accomplished by seeing that each step is transferred to a higher level before the child goes on. As soon as a child is independent and can apply his knowledge of letters and words to new words as he meets them in reading and spelling, by transferring what he has been taught to the unfamiliar words, he should be freed from drill in sounding

and allowed to put his time on work that will bring improvement in other skills of reading which need attention.

The words used in the following illustration are chosen as samples of what may be done with similar groups of words. There should be practice supplied by the teacher at various stages in each step. Many opportunities for transfer to new work would be interspersed in actual teaching. This outline shows how the teacher might carry out the program step by step.

#### STEP I. TEACHING INITIAL CONSONANTS

The teacher says: "Here are some words which begin with the same letter, *back*, *bank*, *book*, *band*. These words all begin with *b*. Can you think of some other words which begin with *b*?" Say the words again as the children say them. Go around the group quickly to see that all children are responding.

Review of initial consonants taught on previous days may be made in a similar manner at this point in the procedure.

#### STEP II. TEACHING BEGINNING BLENDS

After several initial consonants have been taught, appropriate consonant blends are introduced. The teacher says: "Now we are going to listen to the first *two* sounds in these words, *blow*, *black*, *block*. What two letters do these begin with? Can you hear the *b* and *l* in them, *block*, *blow*, *black*? Now listen to these words, *broke*, *bring*, *brook*. What two letters do you hear first in these words? Can you think of any more words which begin with these letters?"

The difference between single initial consonants and consonant blends should be easily distinguished. Such words as *back* and *black*, *book* and *brook*, are used to show the difference.

## BASIC READING ABILITIES

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When several initial consonant blends have been taught, exercises in changing the consonant blends on the same phonogram may be given. *Black* may be changed to *stack*, *track*, *crack*, etc.; *bring* to *sting*, *thing*, *swing*.

After the children gain confidence in two-consonant blends, three-letter blends may be introduced.

### STEP III. TEACHING FINAL BLENDS

Using blends that were readily distinguished as initial blends, ask the children to listen for the last two sounds in such words as *brush*, *blush*, *crash*, *fresh*, *flash*, *wash*. Usually they are able to recognize and give the letters for them immediately.

### STEP IV. COMBINING VISUAL AND AUDITORY PERCEPTION

The teacher writes on the blackboard a word such as *back* that has been taught in the auditory exercises. The children give words which rhyme with it, such as *stack*, *shack*, *crack*, *pack*, and *track*. These also are written on the board. A child is asked to put circles around the parts of the words which are alike.

Many kinds of games and exercises may be introduced at this point to show the difference a single letter makes, or to show how a change of letters in any part of the word changes the word. An understanding of the principle rather than a mastery of the words is expected at this stage.

### STEP V. COMBINING LISTENING AND WRITING

Use words that have appeared in the listening exercises, and say: "Write the first two letters you hear in these words, *black*, *track*, *fresh*, *brook*, *flash*, *crack*, *shook*."

Similar lessons may be given using words with one, two, or three initial consonants. Final consonant blends may be

written for such words as *wash*, *plant*, *thank*, *grand*, *think*. Common phonograms may be written by asking the child to write the last three letters in *band*, *book*, *take*, *bring*, etc.

Tests such as the following may be used after the children have mastered the initial steps: "Write the first letter you hear in *send*." Then,

The first two letters in *stand*.

The last three letters in *bank*.

The first letter in *game*.

The last letter in *glad*.

The last two in *flash*.

The first two in *brook*.

The first three in *sprain*.

The last three in *drank*.

The last three in *fresh*.

#### STEP VI. QUICK-PERCEPTION EXERCISES

Visual analysis of words always needs to be counterbalanced by quick perception of the words taught by analysis. Using flash cards or a tachistoscope, flash quickly the words that have been taught. Oral sentences which give some cue to the word may precede the flash. For example, "This word tells the color of the cat." Then *black* is flashed. "This word tells what we do before we eat": *wash* is flashed. The use of such sentences or questions brings meaning into the words.

After single words have been learned in the quick-perception exercise, phrases containing two or more words may be flashed.

#### STEP VII. READING PARAGRAPHS CONTAINING THE NEW WORDS

Type paragraphs containing the new words taught and paste them on cards. Several such paragraphs may be prepared, and children may exchange them until each child has read all cards. The following is an example of such a story:

John and Mary were *standing* on the corner near the *bank*. They were waiting for the *band* to go by. While they were *looking* down the *street*, a *black* cat ran in front of them. It was afraid of the *sound* of the *band*, and it *shook* as it *brushed* against their legs.

### STEP VIII. READING PARAGRAPHS CONTAINING UNTAUGHT WORDS

For this final step the child is given material containing words not specifically taught, but which are made up of the phonetic elements that he has learned.

### SAMPLES OF WORD-ANALYSIS GAMES AND EXERCISES

Games and devices of many sorts may be used in word-analysis instruction. Modification of many well-known games such as lotto, authors, rummy, anagrams, dominoes, and crossword puzzles are used by ingenious teachers. Slower learners benefit greatly by the extra practice or review provided by such games. They may be used by individuals, by pairs of pupils, or by groups. Such games and devices as those described below are used in conjunction with the class word-analysis program and provide variety for the children who need extra practice.

#### LETTER-OBJECT MATCHING GAME

In this individual device, the child places the initial letter of the name of a well-known object on a picture of the object.

Paste several small pictures on a sheet of oak tag. Pictures of things that children can name at once should be used. An envelope containing small squares with the initial letters of the names of the objects represented in the pictures should be attached with a paper clip to the picture card. Lower-case letters are used, and a dot or mark may



be placed on the bottom of the letter squares to prevent inversion of such letters as *b*, *q*, and *u*. Several extra letters should be included in the envelope.

The child is told to find the first letter of the name of each picture and place it on or below the picture. For example, the child sees the picture of a bird, and places the letter *b* on it.

#### GAME OF WORD BUILDING

In this game, which is a modification of "authors," the child attempts to collect complete sets of cards containing all forms of several words used in the game. The game is especially for children who need to pay more attention to suffixes.

Obtain cards about the size of ordinary playing cards, such as 3" by 5" index cards. On each of four cards constituting a set, print four forms of commonly used words; for example:

<i>wish</i>	<i>wishes</i>	<i>wished</i>	<i>wishing</i>
wishes	wish	wish	wish
wished	wished	wishes	wishes
wishing	wishing	wishing	wished

The first word on a card is the key word and it is different for each card of a set. Make up several sets of cards with other words, such as *laugh*, *paint*, *draw*, *wash*, *sing*, *call*, *play*. As many as twenty sets may be built and used for the game, depending upon the size of the group taking part in the game.

Shuffle the cards and deal four to each child. Use enough cards so that a small pack will be left to be placed face down on the table. The first player calls for any of the three words which are listed below the key word on any card in his hand. If another player holds the card containing the called word as the key word, he must give

the card to the person calling for it. A player continues to call words as long as he draws a card from another player. When he fails to get a card from other players, he must draw from the pack on the table and then discard a card. That ends his turn. The object is to collect complete sets or "books." The player who has collected the most books at the end of the game is the winner.

## FINDING SMALL WORDS IN LARGE ONES

Lists of words like the following are mimeographed. The purpose is to give the child practice in using the part of a word which he knows to help him pronounce the complete word. Directions are typed on the sheet as follows: "Here are some words which are new to you. Hiding in each big word is one or more little words you already know. See how many of the little words you can find and put them in boxes like this:"

		breakfast	pen	ny
ground	basket	helping	steam	party
shook	shallow	fairy	reach	ready
nothing	sport	inside	pushcart	preach
seated	drag	poison	interest	dumpcart

## WORD-BUILDING EXERCISE

The teacher puts a list of common root words on the blackboard with the following directions: "Here is a list of words. You can make several words from each of these words. Let's see how it is done." She then uses a sample word with the individual or class — for example, writing the word *bank* on the board and under it, with the help of the class, writing the words *banking*, *banker*, and *banked*.

The sample should be erased after going over it with

the children, to prevent the tendency simply to copy the sample. Then read through the list on the board and tell the class to go ahead and see how many words they can make from each word.

The children should be instructed to rule their papers into as many blocks as there are words in the list. Each word and the words made from it should be written in a block of its own. The list should contain words that the class needs to know. The following list is only a suggested one:

pitch	bake	fish	skate	water	pump	draw
run	act	race	preach	paint	serve	laugh

#### PICTURE AND WORD-BUILDING GAME

Cut out twelve small pictures representing words on which it is desirable to give the group drill in word building. The small pictures from the Durrell-Sullivan Reading Capacity Test are good for this purpose. Paste the separate pictures on oak tag of convenient size so that they will last. Type or print ten words on strips of oak tag 2" by ½". Cut the strips apart so that the beginning blend and the main part of each word are separated, as:

st art      br oken      cr ush      fl ash

Put the cards and pictures in an envelope. There should be two extra pictures in the envelope, so that when the child comes to the last word there will be more than one picture left and he will have to decide what picture actually fits the word left. On the envelope type the following directions:

- a. Lay the pictures out in a row on your desk.
- b. See if you can make words from the parts of the words on the little cards in your envelope which will tell what each picture is. (If the pictures are verbs or

action pictures, the directions should be: "See if you can make words from the parts of words on the little cards in your envelope which will tell what they are doing in each picture.")

- c. When you are through, raise your hand and read your words to me.

#### MATCHING WORD PARTS

In this exercise, the pupil puts together words that have been cut apart. The material is prepared in the following way.

By lightly ruled lines, divide a sheet of oak tag into ten sections 2" by  $\frac{1}{2}$ ". Print or type one word in each section, using ten words containing consonant blends and phonograms that have been taught previously. The following words are typical: *string, crack, sleep, bring, stand, slice, sheep, stick, stack, choke*. Cut the words apart, using the penciled guide lines, so that all small cards will be the same size. Then cut each word in two, dividing it after the initial consonant blend. Place all the pieces in an ordinary envelope.

Directions may be placed on the envelope as follows: "The little cards in this envelope fit together to make words you know, two pieces to a word. There will be ten words when you are through. See how fast you can put the words together. Remember, the words must be real ones that we have had in school."

Several such envelopes of words may be made, and the children may compete to see which can finish first.

#### ADDING CORRECT SUFFIXES

Prepare a paragraph such as the following one and ask the child to fill in the correct word endings:

John and his brother Ned went fish..... They  
walk..... to a small brook near their grandmother's

house. They had fish..... only a few minutes when they saw a toy boat float..... by. John reach..... for it with his pole and pull..... it to shore. Soon they saw a small boy come..... along the brook. He was hunt..... for his boat and had been cry..... because he could not find it. John gave him the boat and told him how he had pull..... it to shore when he saw it sail..... by.

#### DIFFERENCES BETWEEN *gh* SOUNDS

Since there is no rule that can be followed in pronouncing words which have the different *gh* sounds (which *look* alike to the reader), it is necessary to provide drill whereby the pronunciations are committed to memory. The words should be taught and enriched first in the following groups. The words should then be mixed and put on a word wheel or circular device (see page 221). Putting them on a circular device *after they have been taught* gives opportunity to review them quickly. It is well to go one step farther and give such lists of words for review on flash cards or a quick-flash device for rapid pronunciation. This exercise is for use in the middle grades.

enough	haughty	ghost	night
coughed	daughter	aghast	height
laughing	caught		lightning
rough	naughty		high
tough	dough		bright
laughter	bough		eight
	slaughtered		sleigh
	taught		

#### ADAPTATION OF ANAGRAMS

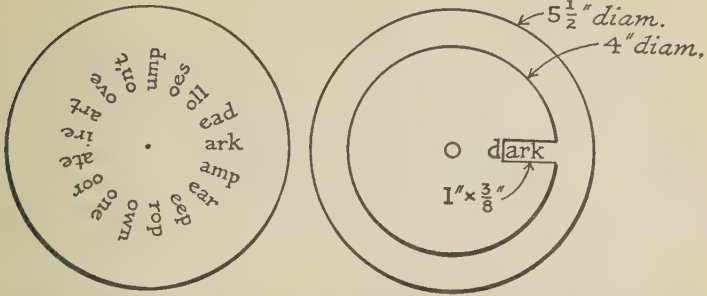
The small wooden anagram letters which may be purchased can be used, or letters may be printed on small

pieces of oak tag. Turn the letters face down on the table. Let each child take ten cards or blocks. Some letters should be left face down in the center. Have several broomstraws of different lengths in an envelope and let each child take one. The child who has the shortest straw gets first turn. He is to make a word. Any other child may take it away from him when his turn comes by making another part of the same word — *not a new word* — as in the regular game of anagrams. If he cannot take a word from someone when his turn comes, he may make one from his own letters. If he cannot do this, he must draw a letter from the pile in the center. Each child may continue to play until he cannot make any new words himself from his own letters or take one from someone else. At the end of each turn each child discards a letter to the center pile. The child who gets out of letters first receives a score of twenty for winning. Each child gets a point for the number of letters he has in words in front of him. A child who has made several long words may get a larger score than the winner of the hand. The scores are added at the end of five hands, which usually take about twenty minutes. The point of the game is to make the longest words possible, since the longer the words made the higher the score.

### WORD WHEELS FOR PRIMARY GRADES

Wheels for teaching beginning consonants (or blends) and for reviewing words taught have their chief merit in the motivation provided. Children enjoy turning the wheels to read the new words that appear. The diagrams below show how the wheels are constructed for individual use. Both initial consonants and initial blends may be used on the top wheel. The wheels also may be made larger than is suggested in the illustration and printed with rubber-stamp letters for use with groups.





Word wheels are made of two disks cut from oak tag. The initial consonant (or blend) is lettered on the top wheel at the end of a slot. Suitable word endings are placed on the bottom disk as shown at the left. The two disks are fastened through the center so they may be revolved to form the different words in turn.

The following lists of words for each of the primary grades are provided for the convenience of the teacher in making these wheels:

### GRADE I. WORD-WHEEL LIST

<i>b wheel</i>		<i>c wheel</i>		<i>d wheel</i>		<i>f wheel</i>	
ball	big	cake	cat	day	dig	fur	fun
back	bow	can	cap	done	dot	fan	fed
bake	bill	come	came	does	did	feed	fat
bell	bump	call	cup	down	do	four	fill
bee	boy	cool	cow	dump	dull	fall	fell
bat	bus	cut	cold	dry	draw	fish	fox
bank	book	cry	cage	dead	dip	fix	fit
band	bark	cook	care	date	doll	fair	fast
bed	barn	cape	clap			find	fire
bit		clay	coal			feet	fine
but						fly	found
						first	feel
						fairy	farmer

# BASIC READING ABILITIES

## GRADE I. WORD-WHEEL LIST (Cont'd)

<i>g wheel</i>		<i>h wheel</i>		<i>j wheel</i>		<i>l wheel</i>	
gay	gas	hen	hat	jump	joy	look	last
game	girl	hot	has	jingle	just	land	like
got	good	hid	how	jail	jay	lake	lead
gold	gum	his	her	jelly	jolly	lay	lit
gone	gave	hay	head	jam		lame	log
give	gifts	hog	house			little	lamp
gray	go	horse	hit			laugh	learn
guess	get	home	hut	<i>k wheel</i>		lot	lap
going	gum	hall	hill	keep	kind	let	legs
grass	green	hop	hoop	kite	kiss	leave	love
grade	good-by	hard	hold	king	kill	live	light
		hook	high	kitten	kept	lion	load
		hand	heat			lock	
		hear					

<i>m wheel</i>		<i>n wheel</i>		<i>p wheel</i>		<i>r wheel</i>	
meet	many	nest	nail	part	paste	rake	run
make	money	neat	none	pin	pan	ran	room
may	mouse	no	not	pot	pink	rush	rat
mat	man	nice	name	pill	pay	rag	rip
men	map	new	night	pig	pat	rain	rice
most	mail	net	news	pit	pack	right	real
maid	met	nip	nothing	puppy	put	ride	roll
meat	morning	needle	nook	pool	pen	ring	red
match	more	nuts		peep	peas	rug	ready
				pine	post	rap	rob
				pad	paint	read	
				poor	pile	ribbon	
				pinch	play	roof	
				pump	pick		
				pail	pass		
				pair	paper		
				pencil			

GRADE I. WORD-WHEEL LIST (*Cont'd*)

<i>s wheel</i>		<i>t wheel</i>		<i>th wheel</i>	<i>w wheel</i>	
sin	sand	tin	tame	thank	wish	walk
say	sat	tall	tap	these	win	waste
sit	seat	tan	take	they	wail	water
sank	sell	tip	top	think	wink	well
same	see	toss	try	those	way	wait
sap	sing	test	tank	them	war	won
sew	sow	tack	took	than	want	went
star	stay	town	toy		week	will
since	slice	tell	teeth		wag	wing
seen	seeds	today	ten		wind	wake
seem	sleep	to	two	<i>y wheel</i>	woke	waves
sink	strange	teacher	tie	yet	witch	warm
stand	swing	trip	toss	yes	wall	
sound	safe	tide	told	year		
slow	soon	toe	taste	young		
		talk		yard		

## GRADE II. WORD-WHEEL LIST

<i>b wheel</i>	<i>b wheel</i>	<i>c wheel</i>	<i>d wheel</i>	<i>d wheel</i>	<i>f wheel</i>
beet	beach	close	danger	drove	fixing
boot	branch	clear	dust	dreamed	filling
bite	baste	cleaner	damp	drink	file
bore	boast	crack	darn	dike	fork
bent	break	cried	dance	dipper	fence
boss		click	drip	daddy	follow
beads		clock	drill		flag
beat	<i>c wheel</i>	cart	dart	<i>f wheel</i>	fellow
barn	candy	cards	dark	fight	flash
burn	caught	child	doom	fingers	frame
beak	camp	chew	deep	five	free
bold	crank	cheese	ditch	foot	fond
board	creep	chilly	door	fast	full
bind	class	chips	dent	fifth	furnish
bench	cling		died	freeze	funny

# BASIC READING ABILITIES

## GRADE II. WORD-WHEEL LIST (*Cont'd*)

<i>g wheel</i>	<i>h wheel</i>	<i>l wheel</i>	<i>n wheel</i>	<i>r wheel</i>
grind	heel	lonely	never	race
greedy	hope	lovely	nature	rust
gain	hem	lump	next	remain
grease	hand	lick	nine	remove
gale	herd	leaf	noble	repair
gallon	hind	lemon	noisy	repeat
gate	holly	length	north	report
gather	horns	level	note	rescue
general	hump	lift	number	riddle
gentle		lightning	nurse	rifle
giant	<i>j wheel</i>	lose	nothing	rind
given	jack	lord	nickel	rinse
glory	jungle	low	native	ripe
gnaw	jaw	lucky	naughty	risk
golden	jewel		nap	rage
goose	job	<i>m wheel</i>	<i>p wheel</i>	roast
gown	joint	match	partner	rail
grab	join	marbles	peach	roll
grant	joke	mark	page	romp
grave	judge	market	parents	roots
ground		marry	park	rope
guide	<i>k wheel</i>	mean	parted	roses
	keen	mush	past	round
<i>h wheel</i>	kennel	melt	passes	rude
hive	key	mercy	pedal	
heap	kindle	messenger	people	
heaven	kitchen	metal	pepper	
half		mix	perfect	
hammer	<i>l wheel</i>	mind	perfume	
happen	lamp	mishap	person	
hang	lamb	mistake	petals	
happiness	last	model	piece	
haste	least	moment	poke	
hatch	loaf	minute	pistol	
hearth	loan	motor	paid	
healthy		mountain	plain	

GRADE II. WORD-WHEEL LIST (*Cont'd*)

<i>s wheel</i>	<i>t wheel</i>	<i>th wheel</i>	<i>w wheel</i>	<i>wh wheel</i>
second	tooth	there	wade	whether
sails	tail	their	wagon	while
seal	trace	those	waist	whip
swallow	trail	thumb	wander	whole
scold	trap	throat	wash	why
sack	trunk	three	warn	
safety	tape		wonder	
sailor	tardy		watch	<i>y wheel</i>
salute	tax	<i>v wheel</i>	weary	yellow
satisfy	telephone	vase	wealthy	yesterday
save	table	vain	weather	yours
scale	tub	very	wed	
scar	tender	velvet	weeds	
scare	tickle	village	west	
school	tires	violet	window	
skip	tile	voice	wool	
skin	tongue	voyage	worth	
screw	touch		write	
swan	tour			
secret	tramp			
seek				
seldom				
self				
serve				
seven				

# BASIC READING ABILITIES

## GRADE III. WORD-WHEEL LIST

<i>b wheel</i>	<i>c wheel</i>	<i>ch wheel</i>	<i>d wheel</i>	<i>f wheel</i>	<i>g wheel</i>	<i>h wheel</i>
broad	clever	chain	daily	farther	gravy	height
broil	carpet	change	dangle	faucet	gallery	habit
bear	cast	charge	dare	fear	group	hail
beauty	cramp	chatter	daughter	fenders	grove	harbor
belief	crust	chest	deal	fever	globe	harden
bend	cabin	chin	deaf	false	ghost	harvest
beside	cage	chief	defeat	frozen	glance	hatchet
better	cave		delight	frost	gleam	hate
between	canary		dentist	fence	glide	heavy
bitten	candle		depart	ferry	glue	hedge
blanket	careful		decide	field	grasp	hint
blink	case		dew	fiery	grind	hitch
blood	cash		difficult	flesh	growl	hobby
body	club		different	flew	guest	holy
border	clothes		direct	flutter	gutter	horrid
borrow	coach		dismiss	fluffy		human
brag	cocoa		district	folks		hustle
brains			dye	fort		
breakfast			dusk	form		
bridge			dwelt	fortune		
brush			dusty	forty		
bureau			drug	forward		
butter			drained	frog		
button			drape	fog		
butcher			drift	frown		
				furniture		

<i>j wheel</i>	<i>j wheel</i>	<i>silent k</i>	<i>l wheel</i>	
jab	journey	knee	label	leather
jail	juice	knife	labor	lecture
jealous	justice	knight	lace	liberty
jerk		knit	lain	limp
jewelry		knock	lair	
jingle	<i>k wheel</i>	know	lantern	
jog	kernel	known	lard	
jolly	kindly	knot	laundry	
jolt	kingdom		leak	



GRADE III. WORD-WHEEL LIST (*Cont'd*)

<i>m wheel</i>	<i>n wheel</i>	<i>p wheel</i>	<i>r wheel</i>	<i>s wheel</i>	<i>t wheel</i>
machine	narrow	pageant	racket	safety	tattle
magazine	nation	paint	radio	sauce	taxes
magic	natural	pantry	rapid	scarce	temper
magician	necessary	parade	rascal	scholar	torture
magnet	nibble	parcel	rather	scrap	tower
major	nonsense	pardon	razor	scramble	treat
manage	northern	paste	realize	scrape	trial
mansion	notify	patient	receive	screech	trumpet
margin	notice	peach	recognize	seek	trust
marriage	nursery	pencil	record	seize	tumbler
meant		piano	remark	severe	tusk
memory		picnic	remember	shave	twist
mercy		pillow	ribbon	shelf	type
middle		pitch	riddle	sign	
mischievous		pocket	rifle	skirt	
mislay		poetry	ripen	sneeze	
mist		police	ruin	special	
mock		polish	rustle	spread	
modest		position		stitch	
moth		pounce			
mourn		pound			
munch		practice			
mystery		principal			
		prompt			

*v wheel*

vacant  
valise  
value  
vanish  
vote  
vow

*w wheel*

warmth  
warning  
wedding  
weigh  
welcome

widow  
width  
wither  
wondrous

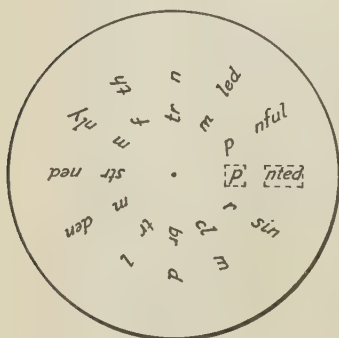
*y wheel*

yawn  
yelp  
yolk  
yonder  
young  
youth

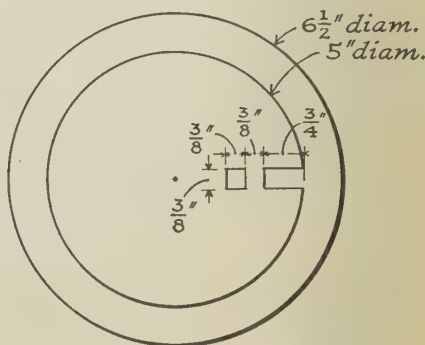
## BASIC READING ABILITIES

## WORD WHEELS FOR MIDDLE GRADES

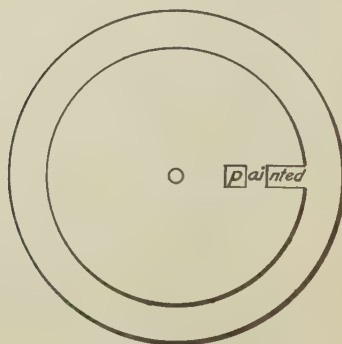
The wheels illustrated below may be used for review of words and for emphasizing vowel digraphs, word roots, syllables, etc., in the intermediate grades.



## BOTTOM WHEEL



### DIAGRAM FOR MAKING WHEELS



### COMPLETED WORD WHEEL

The following sample lists of words built around vowel digraphs may be used and they suggest the method of constructing other suitable lists:

painted	pointed	boating	howl
strained	coil	float	flowers
raisin	boisterous	soap	brown
claim	doily	oatmeal	prowler
braid	hoist	coast	towel
mainly	joined	loan	bowed
trail	boil	foam	power
stain	coin	oars	cowl
afraid	poise	hoard	row
train	join	loaves	tower
aided	loiter	roast	frown
maiden	moisture	moaning	how
ailing	noiseless	boast	fowl
airship	spoil	roaring	vowed
bait	oily	gloat	brow
faith	ointment	soar	growl
maize	pointer	hoarse	vowels
jailer	poison	loaf	yowl
gait	soiled	oak	bower
mailed	toil	poach	
painter	voice	roadster	
painful	rejoice	hoax	
raise		soak	
rainy		loan	
		roam	
		toasted	

In the Appendix, page 392, will be found lists of words for primary grades grouped according to sounds and phonograms, which may also be used with modifications of this type of wheel.

REFERENCES

General references for this chapter are:

- BETTS, E. A. *The Prevention and Correction of Reading Difficulties*, Chapter XI. Row, Peterson & Co., Evanston, Illinois; 1936.
- CORDTS, ANNA D. *The Word Method of Teaching Phonics*. Ginn & Co., Boston; 1929.
- McKEE, PAUL. *Reading and Literature in the Elementary School*, Chapter VI, pages 180-209. Houghton Mifflin Company, Boston; 1934.

The two most common weaknesses found among children who fail to learn to read are poor auditory and poor visual perception of word elements. The most essential part of a reading-readiness program in grade one is to overcome these weaknesses. Unfortunately the term "reading readiness" is being generalized to become synonymous with "motivation" and we now hear of "reading readiness" at all grade levels. The best discussion of reading readiness is:

- HARRISON, M. LUCILE. *Reading Readiness* (Revised Edition). Houghton Mifflin Company, Boston; 1939.

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## CHAPTER 10

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### STUDY SKILLS

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SEVERAL important reading abilities underlie study of the content subjects. The first ability is thorough reading, in which the pupil follows the material closely in order to provide the basis for a complete oral or written account, to give a brief summary of the major and minor points, to answer detailed questions, to follow directions exactly, or, in general, to master the ideas presented.

The second ability is skimming for review purposes. Such reading is adapted to locating desired information quickly, selecting or discarding material related to specific topics, noting general organization of ideas, refreshing the memory as to materials previously read, and other activities requiring rapid reading.

The third ability is associational reading. In this type the pupil combines his own experiences and purposes with the material read, criticizing the selection, finding illustrations of or exceptions to the author's statements, suggesting further research or classroom activities, or in other ways responding independently of the subject matter.

A balanced reading program should include these three general study abilities, since each belongs in a somewhat distinct psychological category. If thorough reading instruction is given to the exclusion of the rapid and the associational types, the pupil will tend to read slowly and inflexibly, being unable to increase his speed when the assignments require only skimming, and unable to add his own ideas to the material read. The child who has mastered only the skills of rapid reading will be unable

to concentrate on the more difficult task of careful, detailed study and will be unable to associate with the reading the criticism and evaluation necessary for certain types of interpretation. If the pupil acquires only habits of associational reading, attending mainly to his own ideas while reading, it may be difficult for him to adjust to assignments requiring either careful, thorough reading or speeded partial reading.

• It is possible for a child to acquire two of these skills at the expense of the third. In both the thorough type and the speeded type the pupil may attempt to understand the author's ideas without using his own. The thorough and the associational types, if combined, may produce a slow reader, incapable of adjustment to situations requiring rapid reading. Certain associational and speeded types tend to ignore details as well as the organization and development of materials read. To guard against the development of weaknesses in study abilities, the teacher should provide for the three major types in a reading program.

Success of the instruction in study skills depends upon adequate motivation and graded lesson plans for each ability so that the child may progress with confidence and security, and upon adjustment of instruction to individual needs as revealed by observation and measurement of pupils. Adequate motivation may be achieved by variety in assignments, by showing the child the suitability of the assignments to his needs, and by demonstrating the child's progress in each ability. The program will be still more successful if assignments are related to the specific individual purposes suggested in Chapter 5. Gradation in difficulty of the assignments may be obtained by progressing from easy to more difficult material, from shorter to longer units, and from simple to more complicated assignments.

Informal tests and observations of the child's success in each type of study skill should provide a basis for adapting



to individual differences. Small groups of children may be given instruction in the skills in which they are most deficient. Others may be excused entirely from instruction in certain skills if test results show that they are proficient. Job-sheet techniques may be used to advantage in developing various study abilities, one child being given an assignment in thorough reading, another in associational reading, and a third in speeded reading in the same material.

#### THOROUGH READING IN RELATION TO STUDY SKILLS

Careful, thorough reading is demanded in most subjects studied in the intermediate grades, in secondary school, and in college. This type of reading is basic for acquiring fundamental information and an understanding of relations among the various elements in a factual background. One may deplore the tendency to make retention of facts the sole aim of education, yet it must be remembered that ability to do careful, detailed reading has important values in both vocational and avocational activities. Almost everyone encounters situations in which it is essential to follow directions precisely, to select from an argument the main ideas for discussion, or to obtain a detailed knowledge of a process or a body of facts. At the same time it must be remembered that too extensive use of thorough reading can produce slavish, slow readers and that this type of reading needs to be balanced by the speeded and associational types.

In the thorough type of reading the goal is ability to recall orally or in writing the primary and the secondary ideas, with attention to organization, accuracy, and completeness of detail. With this objective attained, the pupil should have no difficulty with those types of reading skills covered by standard tests, such as selection of central ideas, organization of ideas, reading for details, following direc-

tions, and other tasks requiring complete recall or evaluation of the important ideas.

### SKILLS BASIC TO THOROUGH READING

The first step in developing skills in thorough reading is to make sure that the child has acquired the habits of attention and comprehension in silent reading discussed in Chapter 7. If the child still displays marked difficulty in dealing with unfamiliar words in silent reading, if he is unable to use context to acquire word meanings, if his attention habits in silent reading are poor, or if he is unable to answer simple fact questions based on short units of reading material, he is not yet ready for the exercises outlined below. However, ability to maintain attention in silent reading and to answer simple fact questions does not alone indicate possession of the habits and skills necessary for completely grasping the organization and development of the ideas in a piece of reading matter.

### TECHNIQUES FOR DEVELOPING SKILL IN THOROUGH READING

Some of the techniques in the development of abilities in thorough reading and recall are these:

- (1) Matching of topics and paragraphs.
- (2) Evaluation of major topics and minor ideas.
- (3) Composing headlines and topic sentences.
- (4) Using the idea line or modified outline.
- (5) Making oral or written summaries based upon the idea line.

1. *Matching topics with paragraphs to which they are related.* This is one of the simplest steps in developing thorough reading. A list of topics is prepared for each paragraph to be read. These are placed in random order on the blackboard or work sheet, and as he reads, the child selects the appropriate topic for each paragraph. On a separate sheet he may copy the topics in the correct order

as he discovers them. Or, if it is desired to save time, the pupil may merely copy the number of the topic belonging to each paragraph. A modification of this assignment is a list of questions in random order, the child matching each question with the correct paragraph. When either summarizing sentences or questions are used, they should serve as models for the child to follow in his later work in summarizing.

2. *Evaluation of main topics and subtopics.* This is the next step in the thorough type of reading skill. The pupil is now presented with a series of short sentences, some of which contain main ideas and some of which contain minor ideas. This list may be put on the board, with a number before each sentence. After the pupil reads the selection, he lists in correct order under the head of "Major Ideas" the numbers for that group and under "Minor Ideas" the numbers for that group.

After the child has had experience in selecting major and minor ideas, as suggested in the previous paragraph, he should have practice in finding topic sentences in the context. Material for this work should be carefully chosen, each paragraph having a clear-cut topic sentence. The topic sentence should first be identified by the group, to make sure that each child understands the exercise and to enable the teacher to give needed help and answer questions. The child can record his successes in finding topic sentences by writing on paper the first three words of the topic sentence for each paragraph.

A second technique in the recognition of major and minor ideas in a selection is evaluation of several summarizing statements for a single paragraph. If the summaries differ markedly in merit, or vary in exactness in relation to the scope of the paragraph, the child should learn to select the most appropriate one. Three sentence summaries are prepared for each of a series of paragraphs and the child selects the one which best fits the paragraph.

3. *Composing headlines and topic sentences.* When the pupil has had adequate practice in evaluating summaries made by the teacher and in identifying topic sentences in paragraphs, he should begin to write his own topic sentences. An effective method for giving an understanding of the writing of topic sentences is to let the child study headlines for newspaper articles. The teacher or pupils collect newspaper articles for the preceding week and the class discuss the suitability of the headlines for the article. After this experience, children can practice writing headlines for paragraphs and articles. Since there are many appropriate headlines for almost any paragraph, the exercise should not degenerate into efforts to guess the exact phrase wanted by the teacher. In the development of this skill it is important that the child have confidence in his own ability to produce a satisfactory headline. Class discussions of the appropriateness of headlines enable the pupil to understand the reasons for the acceptance or rejection of his particular headline.

Ability to write headlines should be followed by the composition of topic sentences. This exercise may start with a headline which is then filled out with necessary words or phrases to make it a more complete summary of the paragraph. Some teachers find that writing telegrams is very good practice in summarizing a paragraph in a few words. Another modification of this exercise is to write the question that the paragraph aims to answer. The results should be evaluated in terms of the central topic of the paragraph and the child should be made to realize when his questions cover minor ideas rather than the major one.

4. *Making an idea line.* The fourth step in developing skills or thorough reading consists of making the idea line. This is a modified form of outlining and logically follows the preceding exercises. It consists of a horizontal line separated into sections by vertical cross-lines at regular intervals. The sample outline below was made by a pupil

for Craig and Johnson's *Our Earth and Its Story*, pages 123-126.<sup>1</sup>

AGES OF FISHES	VERTEBRATES	FIRST FISH	SHARK	SEAWEED	TRILOBITES	CORALS AND SPONGES
Simple forms Fossils of fishes	Earlier forms no back-bones Fish first vertebrates	Two inches long No fins Like an eel Sucked its food	Earlier fishes Five feet long Fins and scales	Many, tall Food Protection	Fewer in number Destroyed by enemies	More common Hard covering Fastened to rocks and seaweeds

The advantages of the idea line are many. It gives the child an over-view of the whole selection, with the major and minor ideas in proper order and relationship. It also enables him to test his memory, by covering the minor ideas with a card or a paper and then attempting to write or tell the entire story from the major ideas alone. It gives a better diagram of relationships than does the usual outline form.

The steps for developing the ability to build an idea line independently are as follows:

- a. The child is given exercises outlined in the preceding paragraphs, which enable him to pick out major and minor ideas.
- b. A well-developed idea line for a chapter read by the child is placed on the blackboard, enabling him to see how the idea line is made. He is also shown how the idea aids recall.
- c. The class prepares an idea line under the teacher's guidance. In the selection of key words and phrases as well as of minor ideas, individual pupils should be allowed a great deal of freedom. The purpose of the idea line is to stimulate the child's memory, and any one of several phrases might be satisfactory. The

<sup>1</sup> Craig, G. S., and Johnson, G. M. "Our Earth and Its Story." *Pathways in Science*, Vol. 6. Ginn & Co., Boston; 1932.



important consideration, of course, is that the key words or phrases be reasonably correct.

- d. Incomplete outlines are given the child with directions to complete them. At the end of the chapter several lines are shown. In the first, the minor ideas are to be filled in; in the second, the major ideas; and in the third, both the major and the minor ideas are alternately omitted. The incomplete outline has the advantage of giving the child security, since he knows that the central part of the outline is complete and that he is to fill in only a few of the blank spaces.
- e. The child builds an idea line independently.

5. *Making oral or written summaries based upon the idea line.* Use of the idea line for written or oral recall can be particularly recommended for the child who has difficulty in expression of ideas. It has often been observed that some children can make good written summaries of what they have read, but can make only meager oral reports; and the reverse is true for other children. One step in the individual diagnostic tests listed in Chapter 2 consists of discovering whether failure in oral summaries results from misunderstanding material or from inability to express the ideas read. Often a child thinks he has told all he can remember of a selection, but many omitted ideas can be brought out by appropriate questions. Similarly, in written recall many children can give only fragmentary summaries of material read, yet under questioning they reveal good comprehension of the entire selection. Use of the idea line helps the child to overcome such handicaps.

The writing of summaries based upon the idea line is for temporary use while skill in speaking and writing from memory is developing. Yet it provides much aid for the child who has not yet learned to develop paragraphs and to make proper transitions between ideas and statements of relationship within paragraphs. After the child has learned to speak or write from the complete idea line, he should



write his summary from the major ideas only, with the minor ideas implied. Later on he may be taught to summarize the major ideas and to use only his memory of these as a basis for speaking and writing. The teacher should not be too concerned about the child's use of an outline from which to speak. It should be remembered that experienced speakers commonly use such aids. Preparation of outlines for materials read provides the child with excellent practice in organizing data needed in oral or written compositions.

### SKIMMING AS A STUDY SKILL

In several types of study assignments partial reading, or rapid skimming, is essential. Skimming is desirable in locating specific information in a chapter, in selecting and rejecting materials for a particular purpose, in classification of short articles or extracts for filing or for use in a piece of writing, and for the purpose of noting the general organization of a selection or to refresh one's memory as to its content. Facility in these abilities is acquired by many pupils without specific instruction for developing such skills. However, many pupils need special practice in the abilities related to partial reading, even though they already have good habits of thorough reading. In the following discussion two aspects of partial reading will be considered separately; namely, skimming to locate specific information and rapid reading to classify materials.

### STEPS IN TEACHING SKIMMING

Several steps or stages of practice are needed for the development of skills in locating information. The practice is carried on under the teacher's guidance without special emphasis on speed. After the child understands the method of locating information, later exercises are speeded by recording the number of answers the child can find in

## BASIC READING ABILITIES

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a limited time or by recording the time required for finding all the answers.

The questions used for the exercises may be written on the board or duplicated on the assignment sheet for each pupil. On a sheet of paper the child indicates the page and the paragraph in which the answer is found, or the page and the first three or four words of the sentence containing the answer. If the answer is a single word or a phrase, these may be recorded instead of the page. The difficulty of the task is increased by using materials several pages in length so that rapid scanning of full pages is required, or by using material with a difficult vocabulary or complex ideas.

The following types of exercises are used for practice in locating specific information:

1. *Locating proper names or dates.* A list of four or five questions is prepared, the answers to which are conspicuous in the text because of capitalization or numbering. Have the child turn to the chapter containing the answers and let him find the answers as quickly as possible. Record the time required to find the answers or the number of answers found in a limited time. Sample questions of this type are:

- a. What city in America makes the most automobile tires?
- b. What was the first year in which more than a million automobiles were sold?
- c. Which company has produced the most automobiles?
- d. How many automobiles were produced in 1938?

2. *Locating answers to questions phrased like the text.* This is one of the simpler types of exercises, since the child uses the phrasing of the question as the basis for locating his answer. The exercises may be further simplified by underlining the cue phrase; later the underlining should be omitted. The exercise is made even easier by selecting

cues which are introductory phrases or sentences. The following are sample sentences:

- a. Where are the furs purchased?
- b. What is the average price of a single fur?
- c. When is the best time of year for trapping these animals?
- d. What is the first stage in preparing the fur for sale?

3. *Locating answers to questions containing no verbal cues.* For this type of question the pupil must seek pertinent ideas for his answer. For example, the questions suggested in the preceding paragraph contain the words of the text to be found in the answer, while the following questions suggest only the ideas to be expected in the answers:

- a. At what place are the furs sold?
- b. How much does the trapper receive for each fur?
- c. During what season are the best furs obtained?
- d. What is the beginning step in making the furs ready for market?

4. *Locating several answers to a single question.* The following general questions are examples of this type:

- a. Find the reasons that Adams gave for his change in policy.
- b. What five changes in the manner of living have been brought about by recent inventions?
- c. Name four occupations of the inhabitants of this region.

5. *Locating information from the table of contents or the index.* The child is given a series of topics on which to gather information. He consults the table of contents for references, then scans the page for the sentence or paragraph containing the answer. Other exercises based on the table of contents are found at the end of the chapter.

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### CLASSIFICATION OF MATERIALS BY MEANS OF PARTIAL READING

A common task in preparing source themes is the selection of paragraphs or sentences suitable for quotation. The exercises below will teach this ability. They will also improve speed of reading and help to overcome habits of lip movement and word saying. This will be true because the reading is specific in purpose and superficial in character, a glance usually being sufficient to indicate the group or class to which the material belongs.

1. *Sorting clippings from three or four articles.* On small cards paste paragraphs from articles or stories found in discarded books or magazines. The articles should be taken from the same book or magazine so that the classification cannot be made merely by looking at the texture of the paper or the size of print. From five to ten paragraphs are taken from each article. Place the titles of the articles side by side on the desk and ask the child to arrange the paragraphs under the proper headings as quickly as possible. Numbers or letters may be written on the backs of the cards to enable the child to check his accuracy. Record the time required to sort the paragraph. Then shuffle the cards and give the child a second chance to demonstrate his speed in this skill.

2. *Classification of short articles from current newspapers.* Clip short articles from the sports, the financial, the society, and the general news sections of a newspaper and paste them on cards as indicated in the preceding paragraph. Shuffle the cards to obtain random order, and present them to the child with the following directions: "These stories were taken from various pages of the newspaper. Put in separate piles those from the sports page, those from the financial page, the society page, and the general news section." Or the child may be asked to select items of interest to an athlete, a banker, or a housekeeper.

A more advanced stage of this exercise is to pass out the clippings without indicating the general classifications and let the child devise his own classification scheme.

Other variations of this exercise are classification of articles and clippings gathered by various class members for nature study, botany, biology, history, or any other content subjects. Classification materials may be prepared and duplicated for several pupils by typing, mimeographing, or hectographing various unrelated paragraphs.

3. *Determining suitability of materials for particular purposes.* The materials may be clippings or paragraphs pasted on cards, or they may be stories from five or six volumes available to the child, labeled by book title, story title, and page. The child looks at the clippings or stories to determine whether they contain information on a particular topic or whether they deal with adventure, travel, humor, or historical characters and events. He may be asked to decide whether the stories are suitable for one of his age while convalescing in a hospital, useful for class dramatization, valuable for present or future classroom study, or related to other important purposes.

#### OTHER TYPES OF SKIMMING

In the reading program skimming may be used to refresh the memory of a story previously read or to determine the general organization or ideas in a chapter not previously read. As the child skims for either of these purposes, he notes the general ideas in the story or chapter. In these types of rapid reading the child will be more successful if he has had practice in the thorough types of reading, particularly in the making of idea lines. Then he can read for topic sentences and general ideas while at the same time he holds the organization in mind. Exercises for such practice really call for the use of both the skills of partial reading and those of the thorough types.



### ASSOCIATIONAL READING IN RELATION TO STUDY

Reading is essentially a creative art in which the writer's words receive meaning and imagery from the reader's background. Associational types of reading, therefore, involve skills of a somewhat higher level than does simple interpretation. In such reading the child pays as much attention to his own thinking as he does to the reading. The reading serves to stimulate thought. While most of the exercises suggested here are suited primarily to stimulating class discussions following reading, many are also adapted to individual assignments. Every child should make his associations as a result of reading rather than of hasty groping for ideas before his turn in the group discussion. To make sure that individual thinking is done, each child should prepare notes or a brief sentence outline of the associations made while reading.

### EXERCISES IN ASSOCIATIONAL READING

The exercises below are roughly graded in difficulty, although the difficulty may be increased or decreased by the form of statement used in the assignment.

1. *Enriching imagery in silent reading.* Suggestions for this type of assignment are found on page 123 of Chapter 6, on oral reading. They may be adapted to individual work by asking the child to list various types of imagery which he used in the reading other than those contained in the reading material itself. For example, he may draw a map of the region in which the story occurs, putting in various houses, roads, and other places mentioned. He may study a list of words for various senses and emotions and underline the appropriate ones. These words should not express ideas actually contained in the story, but rather those contributed by the child through his own imagination during the reading. For example, even though the weather was not described, the child might check his image as to



sunshine, heat or cold, dampness, cloudiness, rain, dust, wind, light breezes, darkness, spring, summer, fall, winter. Similarly, words might be checked for associations with sounds, odors, emotional reactions to various characters, descriptions of various characters, and other elements read into the story by the child. Experience with these discussion lessons for enriching imagery will aid the teacher in accumulating word lists for checking by the child as an individual exercise.

2. *Reading for similar experiences.* For this type of exercise an assignment might be, "As you read this story, think of similar experiences that have happened to you, or think of other experiences which gave you the same sensation as this experience gave Henry." Similarities may relate to types of experiences, emotional results, situations involving people of the same age, approximately the same number of characters, the same time of day, or any other likeness contained in the story. It is important, however, that the child have a specific thinking assignment so that his own ideas are not dissipated.

3. *Producing different endings to a story.* This type of assignment may have the following introductory statement: "As you read this story, think of five other interesting ways of telling it. Number your suggestions, beginning with the one that the reader might like best." Another type of assignment is this: "As you read this story, think of how it would have ended if certain things had not happened or if others had happened. Keep the *if* in mind as you read and think of five conditions which would have changed the ending of the story, such as: *if* the Indians had been friendly; *if* the settlers had been better prepared; *if* the reinforcements had come in time; *if* the rain had held off a little longer."

4. *Finding illustrations of the author's meaning.* The assignment might start in this way: "This writer tries to show that good manners and courtesy make living more

pleasant and also make people more successful in their work. As you read the writer's illustrations, think of others that show he is correct." Another type of assignment might be: "This writer points out that many fires are due to carelessness in the home. As you read his examples, think of other kinds of carelessness which cause fires."

5. *Drawing generalizations from reading.* This is the type of assignment: "As you read this story, think of some general rules to be observed in planning a camping trip." Or, "As you read this story, list some important 'Don'ts' for campers."

6. *Finding exceptions to the author's point of view.* One type of assignment is this: "This writer believes that one should always think of others before himself. As you read the story, see if you can think of times when it is wise to consider oneself first." Another assignment might be: "This author believes that children should not be allowed to work before sixteen years of age. As you read his article, see if you can think of types of work suitable for children and helpful to them, compared to the harmful kinds of work which the author describes."

7. *Reading to discover new activities.* Here are some possible assignments: "As you read this chapter, think of similar things which we could do to improve the appearance of our community. Jot down your ideas as you read." "As you read this chapter, think of things we could do to make classroom work more interesting, such as: making experiments; drawing pictures; carrying on debates, competitions, and dramatizations. Write down at least six things that we might do." "As you read this story, think of interesting things to do week ends or Saturday afternoons, in addition to those suggested by the author."

8. *Reading to discover topics for further study.* This is a typical assignment: "As you read this chapter, list at least six topics related to mining which would be suitable for special reports."

9. *Reading to distinguish sense from nonsense.* These are possible assignments: "Some of the author's suggestions in this essay are serious, while others poke fun at our ways of doing things. Pick out those which he really does not mean." "This selection says many things which could not possibly be true, but are put in just for fun. Pick out the parts which seem impossible or which probably could not happen."

10. *Noting similarities between selections.* Typical assignments are these: "As you read the story of this man's life, compare it with that of Benjamin Franklin, whom we studied earlier this year. Find five ways in which the two lives are alike." "While reading this story on gold mining in Alaska, remember the one we read last week about diamond mining in Africa. Compare the methods and precautions used in the two types of mining."

11. *Noting differences between selections.* The types of assignments just mentioned for finding similarities should be reversed, the child now noting differences between careers of two men or between types of mining.

12. *Detecting differences in points of view.* A typical assignment is this: "As you read this story about men working in the assembly line of automobile factories, compare this author's attitude toward work with the attitude of the author who wrote the article we read yesterday."

13. *Noting relations between the past and the present.* Assignments of this type are these: "As you read this story of the past, think of improvements made by modern inventions; also think of present conditions that have not been changed by these inventions. List three conditions that would have been changed by inventions and three that have not been changed by modern inventions." "As you read this story, list things that would not have been possible one hundred years ago."

14. *Making suggestions for improving a selection.* Here are some typical assignments: "This chapter has many facts,

but it is not very exciting. As you read it, find places for examples, illustrations, pictures, explanations, diagrams, or maps which would make the story easier to understand or more interesting." "As you read this story, think of other happenings which would add to the reader's interest."

15. *Noting the author's bias.* This type of assignment may be used: "As you read this story, remember that the author lived in the South at the time of the War between the States. Notice the difference between his attitude and the one that a Northern writer might take toward the same topic."

16. *Reading to detect over-statements and unfounded claims.* Here are some types of assignments: "This author makes statements praising his plans for improving farm life. List those which you think are not so important or so valuable as the author would like to have you believe." "This advertisement was written, of course, to persuade you to buy this article. What claims are made for the product which could be proved only by careful study?"

### USE OF REFERENCE MATERIALS IN RELATION TO STUDY SKILLS

Certain technical abilities in the use of study aids and reference materials usually need to be taught. Instruction in the use of the dictionary will overcome quickly the slow and inaccurate habits of many pupils. When assignments require the use of reference books, as in independent work and unit assignments, it is particularly important that the pupil be familiar with methods of finding his references.

#### USE OF THE DICTIONARY

The chief uses of the dictionary in study skills are for finding correct word pronunciations, determining word meanings, and verifying spellings. The speed test described in Chapter 2 for locating words in the dictionary will reveal

that some children are extremely slow while others are more rapid. For whatever purpose the child uses the dictionary, ease in locating words is essential to success.

1. *Location practice.* Speed in locating words may be improved by practice, without any other help. A list of ten words is usually enough for such an exercise. The child indicates location of the word by writing the first definition or copying the guide word at the top of the page. Observation of a child locating dictionary words often reveals limited skill in using guide words and in noticing second and third letters of words which indicate whether to go forward or backward in the pages or columns.

The first lists for location drill should contain words with different initial letters and should be placed in random order. Words with the common prefixes, such as *re* and *de*, should not be used; they require attention to the third, fourth, fifth, or even the sixth letter to locate them in the dictionary. The comparative time required to locate two ten-word lists will often be determined by several words with common prefixes in one list and few such words in the other. A second type of list should contain words with the same initial letter but different second letters. Such lists give special practice in scanning words to locate those in any letter group. A third list should be composed of words with identical first and second letters, as found in those with common prefixes, such as *in*, *de*, and *re*.

Often observation of a child locating words reveals that he is uncertain of the general position of individual letters in the alphabet. Sometimes it is helpful to divide the letters into groups of five. By learning the relative positions of the groups the child can more readily find individual letters. However, special importance should not be attached to these divisions, since the child needs to visualize clearly each letter's position in the alphabet. Exercises of this type are valuable for location practice: "What is the second letter after *h*?" "What letter comes before *j*?"



A game can be based on opening the dictionary to the proper letter. Skill in opening at the correct place may be scored by giving a mark of 5 for exactly the right place, a mark of 4 for a one-letter error, etc. No credit is given for a location with more than a four-letter error. This game may be increased in difficulty by allowing no score for two- or three-letter errors.

In another location exercise the group leader tries to open the dictionary to a specific word such as *utilize*; reading the guide word at the top of the page, he may discover it is *window*. The children then tell him whether to turn to the front or the back of the dictionary to find *utilize*. Of course for this exercise words can be chosen from the entire alphabet range.

Exercises in observing guide words at the top of dictionary pages usually improve speed of location. At first such exercises should be confined to a single letter, accompanied by questions of this sort: "Suppose you are looking for the word *illogical*, and you open the dictionary to the guide word *imposing*. Do you turn pages toward the front or toward the back of the dictionary?" Attention should be called to the second or third letter needed for locating the word. Similar exercises are needed for words with common prefixes so that the child will learn to notice the third, fourth, or fifth letters. Several workbooks present more detailed exercises for developing dictionary skills.

2. *Pronunciation practice.* Often children need practice in use of diacritical marks as an aid to pronunciation. Present a list of ten unfamiliar words and ask each child to find the pronunciations and record them for later use. After the words have been found and their marks recorded, have each pupil pronounce them, and give him a score. This exercise requires knowledge of diacritical marks, syllabification, and accent marks. At the bottom of the pages most dictionaries have cue words for each sound. Usually no other instruction than use of these cue words is



necessary to teach diacritical marks. However, time may be saved by giving a group exercise on the vowel sounds and the variable consonants designated by different diacritical marks. Some practice can also be provided in pronunciation of words using major and minor accent marks. Syllabification is easy for most children to understand and usually requires no special drill.

3. *Practice in word meanings.* Matching the story context with dictionary definitions is essential to successful discovery of word meanings. Almost every word is used in various senses, and the child may be led astray by injudicious selection of meanings. Sentences containing unfamiliar words may be taken from a book which the child is to read and duplicated or written on the board for dictionary drill. For each underlined word the child finds the meaning or meanings giving the most probable sense in the particular context. Full knowledge of a word's meaning develops from meeting it in many contexts rather than from direct dictionary study. Dictionary definitions are often so barren and uncertain that even teachers avoid use of new words when no other criterion for meaning is available.

4. *The dictionary as a spelling aid.* Use of the dictionary for verifying spellings usually requires only practice in locating words. However, if the spelling difficulty occurs in or near the initial letters the sound of the word must be used to find possible alternatives; each of these must then be tested and the one with the correct meaning selected. Clear enunciation of vowel sounds and accurate word pronunciation are helpful in this exercise. However, certain syllables are difficult to pronounce, so that a clear indication is given of the vowel to be tried first in looking up the word in the dictionary.

## BASIC READING ABILITIES

### SPECIAL PROBLEMS IN USE OF REFERENCE BOOKS

Special help is needed by some children in using tables of contents or reference materials. Use of the alphabet is essential to speedy location of facts. However, the fundamental skill involves recognition of the key words that will yield the desired information. Present a list of topics for investigation and ask the pupil to underline the key words. It may help to ask him to number in order of value the words chosen to provide the information. Here are examples of topics for such an exercise:

- a. How much coffee is exported annually from Brazil?
- b. What diseases affect cotton plants?
- c. What were the chief methods of transportation in the United States at the time of the Revolutionary War?
- d. Where are the most cotton-textile factories found?
- e. What steps has the government taken to prevent floods?

### USE OF LIBRARY FACILITIES

If the child is to use the card catalogue in the school library or the public library, or to consult encyclopedias and other reference materials, he should be given a "field trip" to these materials under the teacher's guidance. Later he should browse through them by himself to learn the types of information to be found in each source. The bright intermediate-grade child who does independent research might become familiar with *The Reader's Guide*, *The Cumulative Book Index*, the card catalogue, the index of government publications, and any other source material in the community. He may be given individual guidance in writing to special sources of information, such as government bureaus, state universities, research centers, industrial research departments, and chambers of commerce.

## REFERENCES

Authorities are not in complete agreement as to the number and types of study abilities to be taught. This chapter has prescribed a minimum list. Discussions and examples of these and other abilities may be found in the following sources:

McKEE, PAUL. *Reading and Literature in the Elementary School*. Houghton Mifflin Company, Boston; 1934.

This book is particularly fine in its presentation of study abilities. It is the best single reference on study abilities, even for secondary school teachers. The following chapters are recommended: Chapter IX, "Teaching the Ability to Locate Information"; Chapter X, "Teaching the Ability to Select and Evaluate Material Read"; Chapter XI, "Teaching the Ability to Organize Material Read"; and Chapter XII, "Teaching the Ability to Remember Material Read."

National Society for the Study of Education. *Thirty-Sixth Yearbook, Part I. The Teaching of Reading: A Second Report*, Chapter V. Public School Publishing Company, Bloomington, Illinois; 1937.

Further illustrations of the various types of lessons outlined in this chapter may be found in the following books for pupils' use:

HOOVER, CAROL. *Flying the Printways*. D. C. Heath & Co., Boston; 1938.

JOHNSON, ELEANOR. *Diagnostic Reading Workbooks*, Grades IV, V, VI. American Education Press, Inc., Columbus, Ohio; 1937.

WILKINSON, HELEN S. S., and BROWN, B. D. *Improving Your Reading*. Noble & Noble, Publishers, Inc., New York; 1938.

THREE SAMPLES OF INCOMPLETE IDEA LINES

I

CRAIG and JOHNSON. *Our Earth and Its Story*. "Pathways in Science Series," Book VI. Ginn & Co.; 1932.

*Directions.* Fill in minor ideas under major ideas.

"AGE OF FISHES" (PAGES 123-126)

I. DEVELOPMENT OF PLANT AND ANIMAL LIFE	II. DEVELOPMENT OF FISHES	III. DESCRIPTION OF FIRST VERTE- BRATE	IV. DESCRIPTION OF SHARK	V. DESCRIPTION AND USE OF SEAWEED	VI. CHANGES IN TYPES OF FOSSILS
A.	A.	A.	A.	A.	A.
B.	1.	B.	B.	B.	B.
	2.	C.			
	B.	D.			
	1.				

# SAMPLES OF IDEA LINES (Continued)

## II

*Directions.* Fill in major ideas.

### "AGE OF FISHES"

I.	II.	III.	IV.	V.	VI.
A. Simple forms of life B. Beginning of fishlike animals	A. Invertebrate animals 1. Jellyfish 2. Trilobite	A. Very small B. No fins C. Tail D. Mouth	A. 5 feet long B. Fins and scales	A. Large and varied shapes B. Food and protection of smaller animals	A. Disappearance of trilobites B. Appearance of corals and sponges

SAMPLES OF IDEA LINES (*Continued*)

## III

*Directions.* Fill in major and minor ideas.

## "AGE OF FISHES"

I. DEVELOPMENT OF PLANT AND ANIMAL LIFE	II.	III. DESCRIPTION OF FIRST VERTE- BRATE	IV.	V. DESCRIPTION AND USE OF SEAWEED	VI.
A.  B.	A. Invertebrate animals 1. Jellyfish 2. Trilobite B. Vertebrate animals 1. Fishlike animals		A. 5 feet long  B. Fins and scales		A. Disappearance of trilobites B. Appearance of corals and sponges



### SAMPLES OF DIFFERENT TYPES OF STUDY EXERCISES BASED ON THE SELECTION "RADIO ALTIMETER"

Prepared by Katherine G. Keneally, Catholic University, Washington, D. C.

#### Radio Altimeter

Aboard a big United Air Lines plane, flying over New York City a few weeks ago, aeronautical engineers and news reporters saw the successful tryout of an instrument new to aviation. The new instrument is called a radio altimeter or radio feeler and is used to register the exact height of an airplane above the ground. Airmen think it is the greatest aid to air safety ever made.

If a pilot is flying along in a fog, the radio altimeter enables him to take constant readings of the distance from the earth. In case the fogbound plane is off the course and the pilot is unknowingly approaching a mountain peak at dangerously low altitude, the new instrument warns him in time to fly higher and avoid a crash. When the pilot makes a blind landing, the radio feeler signals exactly when the wheels will touch the ground.

In order to compare the old standard altimeter with the new radio altimeter, the testing plane was equipped with both instruments. When flying over the skyscrapers of New York City, the hands of the old altimeter stood still, since the plane was flying a level course. But the pointer of the radio altimeter was dancing crazily across its dial. It was recording the distance from the plane to each of the roof tops below! During the landing at the Newark Airport the radio altimeter registered the progress of the landing, while the standard altimeter was still dropping after the plane had landed. In addition to the radio altimeter, all planes owned by the United Air Lines Company will have a telltale red warning light that will automatically flash on when the pilot flies at an unsafe distance from the ground.

## *BASIC READING ABILITIES*

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### Radio Altimeter

Below you will find several headlines for each paragraph. Draw a circle around the number of the headline that you think is the best.

#### Paragraph I.

1. A New Instrument
2. A Radio Altimeter
3. The Greatest Aid to Air Safety
4. Successful Tryout of a New Instrument
5. Aboard a United Air Lines Plane

#### Paragraph II.

1. How the Radio Altimeter Is Used
2. New Instrument Helps Pilots
3. A Blind Landing
4. Flying in Mountainous Country
5. Altimeter Warns Aviators of Danger

#### Paragraph III.

1. Flying over New York City
2. Comparison of Old and New Altimeters
3. Landing at the Newark Airport
4. Plans for Future Use of Radio Altimeter
5. Recording Distance from Plane to Roof Tops

### Radio Altimeter

Fill in the minor ideas under the major ideas.

#### I. Successful Tryout of Radio Altimeter

##### A. Where tryout was held

1.

##### B. Tryout seen by

1.

2.

##### C. New instrument is called

1.

2.

##### D. Opinion of airmen

1.

II. Uses of radio altimeter

A. In fog

1.

B. In landing

1.

III. Comparison of old and new altimeters

1. Flying over New York City

a. Old altimeter

1.

b. New altimeter

1.

2. Landing

a. Old altimeter

1.

b. New altimeter

1.

IV. Future plans of United Air Lines Company

1.

2.

Radio Altimeter

Fill in major ideas.

1. New York City	1. Aeronautical engineers 2. News reporters	1. Radio altimeter 2. Radio feeler	1. Greatest aid to safety
1. In fog	1. Hands stood still when flying over skyscrapers	1. Pointer dancing crazily when flying over skyscrapers	1. To make radio altimeter standard equipment on all planes
2. In landing	2. Altimeter still dropping after plane landed	2. Registered progress of descent exactly	2. To add an automatic red warning light

Number these headlines in the order in which they occurred in the paragraph.

*Example.*

Paragraph I.

- 3 Greatest aid to air safety
- 1 New instrument successfully tried
- 2 Radio altimeter registers exact distance above ground

Paragraph II.

- Radio feeler signals when landing
- New instrument warns pilot of low altitude
- Radio altimeter enables pilot to fly in fog

Paragraph III.

- Testing plane equipped with old and new instruments
- Comparison of altimeters when flying over New York
- Future plans of United Air Lines Company
- Altimeter records distance from plane to roof tops
- Standard altimeter records distance inaccurately

Draw a circle around the number of the summary that you think is the best.

1. When trying out the radio altimeter, the testing plane was equipped with a radio altimeter and a standard altimeter. The radio altimeter measured the distance of the plane from the ground much more accurately than the standard altimeter. Airmen think it is a great invention.

2. Aeronautical engineers and news reporters saw the successful tryout of a radio altimeter in New York City. It registered the distance of the plane to the roofs of the skyscrapers. It also registered the progress of the plane when landing at the airport.

3. The radio altimeter is a new instrument that registers the exact height of an airplane above the ground. It is a great aid to aviation, as it enables the pilot to fly safely in a fog and to make a blind landing without an accident. It is a great improvement over the old standard altimeter and in the future will be used on all United Air Lines planes.

## SAMPLES OF DIFFERENT LEVELS OF SKIMMING EXERCISES

Prepared by Clarinda Kier, Graduate Student, Boston University

## I. Skimming to locate proper names and dates.

1. Ben Franklin was born in the year \_\_\_\_.
2. Ben's oldest brother's name was \_\_\_\_.
3. Benjamin ran away in the year \_\_\_\_.
4. The name of the young girl who laughed at him from her doorway and later became his wife was \_\_\_\_.
5. Benjamin could find no work in \_\_\_\_.

## II. Skimming to locate answers to questions which are phrased in the same vocabulary as that found in the selection.

1. Little Benjamin had \_\_\_\_ brothers and sisters.
2. Benjamin was taken from school so he could \_\_\_\_.
3. The name given one who is bound to stay for a number of years to learn his trade is \_\_\_\_.
4. When Benjamin was 17 years old, he \_\_\_\_.
5. Ben walked along the streets of Philadelphia, carrying \_\_\_\_.

## III. Skimming to locate answers to questions which are phrased in a different vocabulary from that used in the selection.

1. Benjamin was unhappy in his first work because he wanted to be a \_\_\_\_.
2. Ben enjoyed his work as a printer for a while because he liked \_\_\_\_.
3. Ben got his articles into his brother's paper by \_\_\_\_.
4. Ben liked to \_\_\_\_ better than he liked to eat.
5. A girl who was amused by the sight of ragged Ben later became his \_\_\_\_.

The answers to these questions are found in:

WILSON, LUCY. *History Reader for Elementary Schools*, pages 143-147.  
The Macmillan Company, New York; 1929.

## BASIC READING ABILITIES

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### DICTIONARY DRILLS

Prepared by Esther Millett, Westover School, Middlebury, Connecticut

1. Put the following letters in alphabetical order:

- a.* p, b, y, m, o, c, f, d, r, q
- b.* s, n, x, d, a, t, l, h, e, k
- c.* g, j, w, i, z, u, m, c, v, s

2. *a.* Underline the letters which come first in the alphabet:

r or s	w or v
p or q	k or m
l or h	n or m
r or o	d or f
b or d	e or c

*b.* What letter comes after each of the following letters?

f	m	w	i	o
l	r	u	p	j
s	b	k	g	h

*c.* What letter comes before each of the following letters?

h	o	y	k	q
n	t	w	r	f
u	d	m	i	j

3. Put the following words in alphabetical order:

<i>a.</i> library	schoolroom
breakfast	gymnasium
dinner	teacher
roommate	corridor
infirmary	uniform

<i>b.</i> phalanx	gallant
ligneous	strabismus
inflorescence	fluoroscope
auriform	tritheism
riparian	cockatrice



*c.* conceit  
chagrin  
centenary  
cyanic  
curious

clank  
catalogue  
crayon  
circle  
czar

*d.* sapling  
sandal  
sarcastic  
sapphire  
sanitary

saving  
satellite  
sate  
sanitation  
satirical

4. Locate the following words in the dictionary and put down the guide words at the top of the page where they appear. Do not look at the meanings. Time yourself.

*a.* athletic  
biology  
hockey  
chapel  
laboratory

ever  
piano  
quadrangle  
skiing  
west

*b.* Put these words in alphabetical order first, then find the guide words, and see if you can better your time:

church  
luncheon  
spelling  
music  
physics

history  
architecture  
recess  
dance  
tennis

In the following exercises do not look for the word but only for the guide word at the top of the page. Put down only the number of the page on which each word will be found. Time yourself.

*c.* vociferate  
subjugate  
ditheism  
horoscope  
rheum

cedilla  
mnemonic  
titivate  
aorta  
idiosyncrasy

## BASIC READING ABILITIES

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d. Put these words in alphabetical order first, then find the guide words, and see if you can better your time:

unguent	stricture
disembody	connubial
confluent	disavow
stigma	propitiation
proletarian	unanimous

5. a. Each meaning for a word in the dictionary is numbered. Some words are listed more than once. See how many meanings you can find for each of these words:

tie	plate
bear	well
contract	hold
state	beat
give	knot

b. What do the following abbreviations mean? a., adv., art., conj., n., prep., v., vi., vt.

How many meanings have the following when used as nouns? as verbs?

train	bend
note	content
tip	list
lay	tack
range	rank

6. What parts of speech are the following?

to	yellow
too	into
always	very
an	but
pretty	for

7. a. Do you know what the following marks over letters mean?

—    ˘    ^    ..    ~    ˆ    ˘

They tell you whether vowels are long or short and help you to pronounce words. Look at the top or the bottom of the

pages in your dictionary for well-known words marked to help you in pronouncing new words. Look up the following words and indicate their pronunciation by use of the "diacritical" marks:

isosceles	boomerang
bolo	secretary
incertitude	alienate
pasha	catacomb
sepulcher	triad

*b.* A mark like this ' tells you what syllable to accent when pronouncing a word. Two of these marks, like this ", mean that the syllable to which they point has a slight accent. Look up the following words and indicate their pronunciation by the use of the accent mark:

desultory	acclimate
formidable	harass
address	inhospitable
envelop	epitome
pianist	illustrate

8. "Obs." and "arch." are abbreviations which stand for "obsolete" and "archaic" — meaning that a word is no longer or seldom used. Sometimes signs such as these || † are used to indicate the same thing. Find the obsolete or archaic meanings of these words:

seldom	price
maiden	care
dome	eager
leech	wear
material	abode

9. What do "syn." and "ant." stand for? How many synonyms and antonyms can you find for each of these words?

swift	admire
cease	relate
bland	quicken
permit	offer
hard	motion

## BASIC READING ABILITIES

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10. Many words have come to us from other languages. This derivation or etymology of a word is shown by abbreviations of the languages in brackets following the word. Some of the abbreviations are Gr, Greek; L, Latin; Fr, French; OF, Old French; AS, Anglo-Saxon; G, German; It, Italian. You will find others. Look up the following words and tell what language they come from:

ort	polygamy
pliant	tone
grill	guilt
restaurant	bask
campanile	vow

11. *a.* Where will you find proper names in your dictionary? Look up the following and identify them:

Istanbul	Beowulf
Czechoslovakia	Popocatepetl
Nebuchadnezzar	Lilliput
Haakon	Osler
Rig Veda	Clemenceau

*b.* Where will you find foreign words and phrases? What is the meaning of each of these words or phrases?

en route	ex libris
Dieu et mon droit	auf Wiedersehen
id est	l'allegro
mañana	vale
et tu, Brute	rara avis

*c.* Where are abbreviations to be found in your dictionary? What is the meaning of each of the following?

q.e.d.	P. S.
alt.	A.D.
M. P.	R. F. D.
P.M.	Ia.
Bart.	ed.

*d.* What other special lists has your dictionary?

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## CHAPTER II

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### SPELLING

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THE fundamental psychological skills underlying reading and spelling are similar. In general, reading ability correlates closely with spelling ability, since skill in word perception is essential if a child is to recall words vividly enough to write them. Poor reading is almost always accompanied by poor spelling. Since reading and spelling functions are so closely allied, economy of effort warrants correlating the two subjects, especially among slow learners or in remedial classes. Often it is desirable to teach word analysis in connection with spelling rather than reading.

On the other hand, spelling is more closely related in its applications to written composition than to any other school subject. If spelling is to affect written composition, it is essential that it be closely correlated with composition. The teaching of spelling will fail to have the desired influence upon composition if specific provision is not made to that end, or if the correlation consists only of using words in sentences but without emphasis upon particular purposes or the development of ideas. Slow-learning pupils especially need careful correlation among the words used in reading, spelling, composition, and handwriting. A great number of spelling lists and spelling books are available for school use. Often no relation exists between these words and those used in other elementary school subjects. No reason is offered for permitting spelling to pursue its own course without relation to the rest of the curriculum. It is preferable that a child develop security in use of a small spelling vocabulary suitable to his grade and derived

from the demands of written composition, to his attempting mastery of a long list from which will result confusion concerning many unrelated words.

#### THE SPELLING ASSIGNMENT

Usually spelling should be a small-group activity, since seldom do more than four or five pupils have similar spelling needs and learning rates. Pupil-teachers, too, can ordinarily best care for small groups in spelling. The usual weekly assignment consists of twenty words in each intermediate grade, but the number of words to be learned each week depends upon the child's capacity to master spelling. It is preferable for a child to master ten words with a feeling of security than to flounder in a longer lesson without success.

Words whose meanings are unknown to the child should not be included in the spelling lesson. Words that are not already in a child's speaking and reading vocabularies will not be used in composition. Even enrichment drills on word meanings and word recognition will not insure later use of the words. It is better to avoid teaching the spelling of words that the child has neither ability nor desire to use. Of course, improvement in extent and choice of the writing vocabulary should be encouraged and some unusual words should be learned and used.

#### THE METHOD OF INSTRUCTION

Teaching spelling through rules is of little value. Essentially, spelling is a non-thinking, automatic, motor response to an ideational or visual stimulus. The automatic nature of the response is seen when one is asked to spell a word. Usually one replies, "Wait a minute and I'll see," and immediately starts to write it. Often this comment follows, "If you had not asked me, I could have spelled it correctly." To attend to a word's spelling may raise doubt as to the



final response. Since English words are non-phonetic, mere thinking does not reveal the spelling of words. Spelling errors of individuals often result from the improper use of rules. Many investigations bear out this conclusion.

The "test-study" spelling method has been advocated by many people on the ground that it saves time in locating words needing emphasis in each class. The chief argument against this method is that the child may practice errors unless he is successful on the initial presentation. The best criterion as to the usefulness of the "test-study" method for a particular group is the per cent of words spelled correctly on the initial test. If 90 per cent of the words to be taught have already been mastered, the "test-study" method probably saves time and results in little initial drill on errors. However, if a child misses 30 per cent or more of the words in the initial test, the method is obviously unsuited to him, since it produces much practice in confusion. For faster learners, then, the "test-study" method can be recommended, while for slow learners presentation and study should precede testing.

Intermediate grade and high school pupils should be encouraged to keep personal spelling lists of words misspelled in written composition and words that are avoided through fear of misspelling. For a child to keep a correctly spelled list of words he has missed for use whenever the difficult word is again encountered is preferable to superficial and often ineffective drill on all misspellings in written work. Many adults find that their difficult words are repeatedly misspelled unless they list the correct forms for reference when writing. A personal list is particularly useful for a child with extreme spelling difficulty. If his list is written in a small book or on a large card and alphabetized for easy reference, the child quickly learns the correct forms and after a time can dispense with the list. Such a list enables him to write without constant reference to the dictionary. Spelling should not block the child's

## *BASIC READING ABILITIES*

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flow of ideas in writing. A reference word list tends to facilitate composition work.

### DIAGNOSIS AND TREATMENT OF SPELLING DIFFICULTIES

Spelling difficulties usually result from the child's lack of development of the following basic abilities:

- a.* Ability to understand the meaning of the word to be spelled.
- b.* Ability to spell "by ear." A child should be able to write the essential parts of a word from hearing it, even though the word may not be spelled phonetically.
- c.* Ability to visualize word elements. So large a percentage of English words are partly non-phonetic and dependent upon visual memory that this ability is essential in spelling.
- d.* Ability in speed of handwriting.
- e.* Ability to transfer from the spelling lesson to the written composition.
- f.* Ability to avoid systematic errors.

### MEANING DIFFICULTIES

In examining a child's spelling difficulties the first step should be to determine whether he misspells words that he does not know or that carry little meaning or motivation for him. The word-association method of Chapter 8 makes possible the testing of words to determine their richness of meaning for the child.

### AUDITORY DIFFICULTIES

Ability in auditory analysis of words can be discovered by dictating selected unfamiliar words with these instruc-

tions: "The words to spell are new to you. I want to see whether you can spell them just as they sound. Listen carefully and then write the words exactly as they sound." The words chosen should be spelled as they sound, even though the child may never have heard them before. In the lower grades use words of two or three syllables; in grades five and six or above use words of three to five syllables. Usually ten such words are sufficient to determine difficulties. Score the list in terms of the presence in each word of the essential sounds. Some vowel sounds may be represented by two different vowels; an error results when the vowel is incorrect for a particular sound. Notice whether syllables are added, omitted, or put in wrong order.

If a child has difficulty in writing phonetic words from an auditory presentation, he needs ear training. The ear-training exercises found in Chapter 9 are suitable for developing ability to notice sounds in words. One step in those exercises provides practice in writing sounds after hearing them and in noticing similarities in word sounds. The first three steps in the word-mastery program are essential to ear training. Another method consists of pronouncing the syllables with exaggerated separations. Thus the child hears the syllabification of the word emphasized and writes a sound for each syllable. It is to be noted, however, that a common spelling difficulty in the intermediate grades and above results from being over-phonetic rather than under-phonetic. The child should be cautioned that words are not spelled exactly as they sound and that he should not rely entirely on his ears for writing all words. Even when ear training is given, the child should understand that although there are letters for each sound, certain sounds are represented by various letters. He should understand that many words must be remembered entirely as visual wholes and that sounding cannot be depended upon.

### VISUAL DIFFICULTIES

Visual memory is tested by presenting visually ten to twenty unfamiliar non-phonetic words and asking the child to write them from memory. The words are printed on a large flash card and the child is allowed to look at them for three to five seconds; then he writes them. The test should be scored exactly, all deviations from the original spelling being counted as errors. Note should be made of omission or addition of essential letters and of grasp of word visualization by syllables or larger elements. The number of visual elements which a child sees in a word largely determines its difficulty for him. For example, the word *information*, consisting of eleven letters, is hard for a child who remembers it as eleven separate letters rather than as four essential units, *in-form-a-tion*. Ability to visualize words by large units is essential to success in spelling.

Failure to remember visual word forms is the basic difficulty in English spelling. The best method for overcoming the visual difficulty is use of the flash-card method of word study. It is essentially the visual-motor method as applied to word recognition in Chapter 8. The steps are as follows:

- a. Present the word to be spelled on a large flash card in print.
- b. Pronounce the word and have the child pronounce it.
- c. Make sure the word has full meaning and enrich it by use of the word-meaning technique described in Chapter 8.
- d. Remove the word so the child cannot see it, and ask him to write it.
- e. Show the word again, pronounce it, and ask the child to check his spelling.
- f. Have the child cover his previous spelling and write the word again.

- g. When four or five words have been learned, combine them into a sentence with easier or familiar words. Ask the child to write the sentence, recording the time required. Timing may be done by indicating on the board five-second intervals. When finished, the child writes the last number that appears on the board.
- h. Ask the child to write the sentence a second time, covering his previous copy. Tell him to write as rapidly as possible, being sure to write legibly enough for easy reading. Record improvement in time.
- i. Give a third practice in writing the words as fast as possible. Usually a child does not improve his speed after a third trial.

Rapid word writing in sentences tends to make correct spelling more automatic. This exercise aids too in transferring spelling to composition, since the child automatically writes the words correctly. Sometimes attention may be called to the syllables of the word or to the large word elements, the child thus viewing the word as a series of familiar units. The lantern-slide methods, described by Zyve,<sup>1</sup> are especially valuable for enriching the visual memory of words.

#### SPELLING DIFFICULTIES RELATED TO HANDWRITING

Speed of handwriting is important for automatic, accurate spelling. While rapid writers make spelling errors, children with spelling difficulties are often slow writers. If a child writes much below the normal rate for his age, he should have practice to improve his speed. To measure handwriting speed, have the child copy for two minutes

<sup>1</sup> Zyve, C. T. "An Experimental Study of Spelling Methods." *Contributions to Education*, No. 466. Teachers College, Columbia University; 1931.

from an easy book with these directions, "Write as rapidly as you can, but be sure you write clearly enough for it to be read easily." Generally, two minutes are enough to take a sample of a child's handwriting speed.

The table at the right indicates normal handwriting speeds. It is based upon tests given in surveys conducted by the Boston University Educational Clinic.

HANDWRITING SPEED

AGE	LETTERS PER MINUTE
7	35
8	45
9	55
10	65
11	70
12	75

These are actual age scores and not ideal standards. Probably children should write at rates considerably above these. If a child writes at a distinctly slow rate, his handwriting should be observed to determine whether he has difficulty in the formation of particular letters. If the child stops to remember the formation of a letter, his flow of thought is broken.

Usually handwriting speed is improved by the visual-motor method just described. However, if a child has difficulty in forming individual letters, he should receive special help in his handwriting. Practice for speed is essential to permanent handwriting skill, just as is practice in correct letter formation. Cole<sup>2</sup> suggests that without a speed of at least one hundred letters a minute handwriting will deteriorate, since this rate is necessary for most adult uses. When drills for handwriting speed reduce legibility, a "penalty score" should be used. This consists of crossing out poorly formed letters and then for each poorly formed word subtracting from the letters-per-minute score.

In primary grades manuscript writing can be recommended, since it is similar to regular book print. Freeman<sup>3</sup> suggests that manuscript writing is preferable for the first two grades, to be followed by cursive writing after the

<sup>2</sup> Cole, Luella W. *Psychology of the Elementary School Subjects*. Farrar & Rinehart, Inc., New York, 1934.

<sup>3</sup> Freeman, F. N. "Evolution of Manuscript Writing." *Elementary School Journal*, Vol. 36 (February, 1936), pages 446-455.



second grade. Voorhis<sup>4</sup> demonstrated that manuscript writing gives children a clearer concept of words than does script writing. She shows that primary-grade children who used manuscript writing made greater improvement in reading than those who used script.

#### TRANSFER DIFFICULTIES

Failure of spelling skill to transfer to composition is common. Often it results from the words learned in spelling lessons not being used in composition for a long period of time. Another cause of failure in transfer is inadequate mastery of the word. The child may spell the word accurately by chance or by paying careful attention to it during the lesson. When he is writing a composition, however, his ideas distract his attention from the correct spelling of the word. Analysis of this difficulty consists of noticing whether words misspelled in composition were previously spelled correctly in the spelling lesson.

Correct spelling in composition can be improved by dictating sentences in the spelling lesson rather than individual words to be written in columns. Also the word-enrichment technique tends to add meaning to words. Then, when attention is given to the meaning of a word in a composition, the child is more likely to write the correct form. It will aid transfer to have children make up sentences containing certain spelling words. It is also helpful to read to the child a paragraph containing words learned in spelling and to ask him to write a summary of the paragraph using the spelling words. Since attention will be given to remembering and writing the story, the transfer difficulty often appears and can be met immediately. Generally the best aid to transfer is mastery of the words to the point of automatic response.

<sup>4</sup>Voorhis, T. G. *The Relative Merits of Cursive and Manuscript Writing*. Bureau of Publications, Teachers College, Columbia University; 1931.

### DIFFICULTIES DUE TO SYSTEMATIC ERRORS

For children with extreme spelling difficulties in the intermediate grades or above, tabulations may be made of the nature of the errors. Often these reveal systematic errors on certain types of words, letter combinations, or sound combinations.

In tabulating errors it should be noted whether they relate to words spelled phonetically or to words spelled unphonetically. Presence of many misspellings that are correct phonetic representations usually indicates over-attention to sounds or an attempt to reason out a word's spelling rather than an automatic response to the word. The classification plan for the tabulation will depend somewhat upon the nature of the errors. The tabulation given on page 277 was based on an analysis of 159 errors. It will be noticed that of these 159 errors, 142 were correct phonetic spellings and 17 were incorrect phonetic spellings.

### MEAGER WRITING VOCABULARIES

The final test of spelling is the written composition of the pupil. If the spelling words are well chosen or their meanings made vivid at the time of teaching, the written work of the pupil should show a richer vocabulary as spelling ability grows. An interesting study of the fullness of writing vocabulary may be made by counting the words in a child's composition which do not appear on the first three levels of the primary vocabulary in the Appendix of this book. Corson<sup>5</sup> found that 80 per cent of the words in intermediate-grade compositions were from the list.

<sup>5</sup> Corson, Hazel. *Individual Differences in the Writing Vocabulary of Intermediate-Grade Children*. Unpublished Ed.M. Thesis, Boston University; 1938.

CONFUSIONS DUE TO PHONETIC SPELLING IRREGULARITIES

In this analysis of 124 misspelled words, 159 errors were noted. Of these, 142 were correct phonetic spellings and 17 were incorrect phonetic spellings.

Consonant errors .....	67	Vowel errors ( <i>Cont'd</i> )	
Doubling unnecessarily ...	14	Omission of digraph	
Failing to double .....	21	(one letter) .....	10
Digraphs formed unneces-		Wrong digraph .....	6
sarily .....	10		
One letter of digraph omit-		Total errors incorrect pho-	
ted .....	3	netically .....	10
Wrong consonant (correct		Omission .....	3
phonetically) .....	15	Addition .....	4
		Wrong vowel .....	1
Total errors phonetically		Omission of digraph (one	
correct .....	63	letter) .....	2
Total errors phonetically			
incorrect .....	4	Orientation errors .....	8
Vowel errors .....	82	Total correct phonetically	5
Total correct phonetically.	72	Wrong letter sequence .	5
Wrong vowel .....	23	Total incorrect phonetically	3
Omission .....	8	Wrong letter sequence ..	2
Addition .....	8	Inversion, <i>b</i> for <i>p</i> .....	1
Forming digraph unneces-			
sarily .....	17	Omission of syllables .....	2

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## CHAPTER 12

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### MAJOR CAUSES OF READING DISABILITY

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A LARGE number of children acquire faulty habits and confusions which tend to retard their progress in reading. One study of 1130 children who were given an individual intelligence test (Stanford-Binet) and three reading tests (Stanford Achievement, Chapman-Cook, and Burgess) at the end of the sixth year in school showed that 445 children, or 39 per cent, were a year or more below grade in reading.<sup>1</sup> Of these poor readers, 327, or 73 per cent, had intelligence quotients below 90, while 118, or 27 per cent, were average or superior in intelligence. Of each four children falling behind in reading, one is likely to be of normal or superior mentality.

Usually a child is said to have "specific reading disability" or to be seriously retarded in reading when his reading achievement is a year or more below his mental age. Dull children cannot work up to grade standards when they are mentally immature for their grades. Yet any child may be expected to do as well as his mental age allows. In the study mentioned above, grade standards were referred to. It was also found that 15.2 per cent of the children were reading a year or more below Stanford-Binet mental age. Slightly over 3 per cent were retarded two or more years below mental age and may be said to have "severe reading disability." A study of more than six thousand children in grades two to six with the Durrell-Sullivan Reading

<sup>1</sup> Durrell, D. D. *Reading Disability in the Intermediate Grades*. Unpublished Doctor's Dissertation, Harvard University; 1930.

Capacity and Achievement Tests revealed that 14.6 per cent were reading a year or more below hearing comprehension and 3.4 per cent two or more years below.<sup>2</sup>

Retardation of at least one year, as a basis for selecting children for special attention in reading, is satisfactory in the middle grades, but in primary grades a more rigid criterion is required. A child in first grade who is six months behind is much more seriously retarded than a sixth-grader who is a whole year behind. In an individual word-inventory study of 389 first-grade children, Donnelly<sup>3</sup> found that at the end of the ninth month, 6.8 per cent were reading below third-month standards and 20.8 per cent were reading below sixth-month standards.

Almost all problems in reading can be traced to a poor beginning, with difficulties increasing as the child progresses through the grades. This does not mean that first-grade teaching is exceptionally poor. It means that confusions and difficulties appear early in the reading process and that special effort should be made to analyze them and to provide for individual differences early in the first year.

#### READING DIFFICULTIES AND NATIVE ABILITY

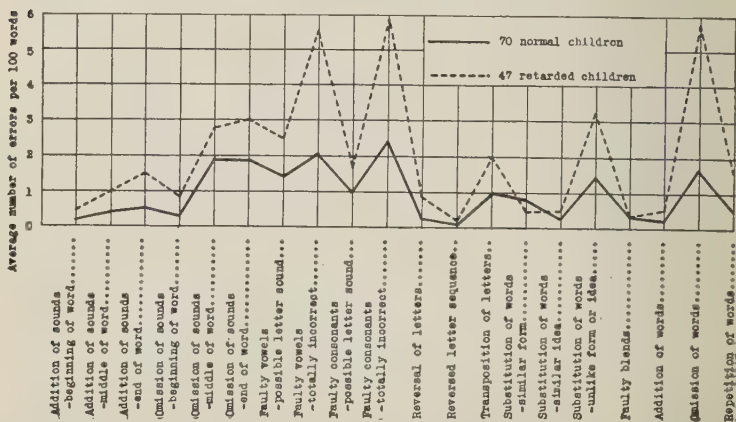
Children of superior mental ability should do superior school work. While the bright child who does average work creates no problem in the classroom, he may later become a perplexing one. High school and college work is planned for persons of superior ability, but the bright child with only average reading achievement will find difficulty in advanced subjects in which reading is essential. It cannot be overemphasized that the bright child doing

<sup>2</sup> Durrell, D. D., and Sullivan, H. B. *Durrell-Sullivan Reading Capacity and Achievement Tests: Manual*. World Book Company, Yonkers-on-Hudson, New York; 1937.

<sup>3</sup> Donnelly, H. E. "The Growth of Word-Recognition Skills in Grade One." *Education*, Vol. 56 (September, 1935), pages 40-43.

## BASIC READING ABILITIES

### WORD-PERCEPTION ERRORS OF BRIGHT AND OF DULL CHILDREN (Williams)



average work deserves special attention in the remedial program. The retardation study quoted above<sup>4</sup> included 290 children with intelligence quotients of 119 or over; of these, 72, or 25 per cent, were a year or more retarded in reading with respect to mental age.

Throughout this book no attempt is made to prescribe for the bright child apart from the dull one. Remedial work is determined by the child's reading difficulties rather than by his intellectual level. Williams<sup>5</sup> has made a comparison between the word-perception errors of dull children and those of average and bright children. Her results in the profile above show that the same types of errors are made by each group.

Duffy<sup>6</sup> shows similar findings for bright and for dull children in the third grade, using errors in oral reading as the basis of comparison. (See profile on page 281.)

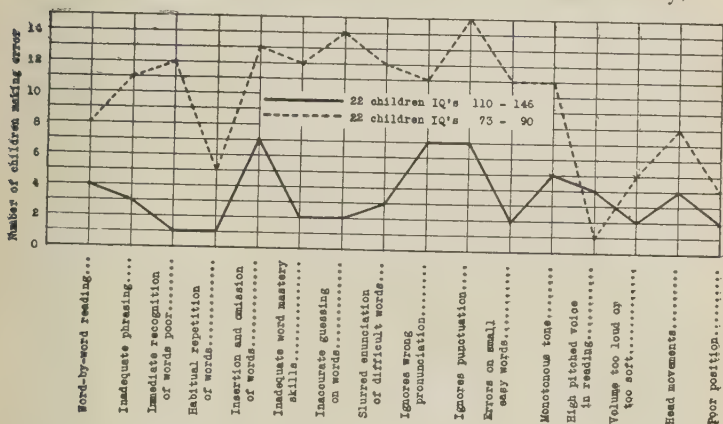
<sup>4</sup>Durrell, D. D. *Reading Disability in the Intermediate Grades*. Unpublished Doctor's Dissertation, Harvard University; 1930.

<sup>5</sup>Williams, G. H. *Perceptual Difficulties in Reading*. Unpublished Ed.M. Thesis, Boston University; 1934.

<sup>6</sup>Duffy, G. B. *Diagnostic Study of Reading Difficulties in a Third Grade*. Unpublished Ed.M. Thesis, Boston University; 1934..



ORAL-READING ERRORS OF BRIGHT AND OF DULL CHILDREN (Duffy)



## READING ACHIEVEMENT AND SEX DIFFERENCES

Boys have much more difficulty in reading than do girls. In the study of 1130 children using Stanford-Binet as the criterion, 20 per cent of the boys were retarded in reading, while only 10 per cent of the girls were similarly retarded. Among the six thousand children given the Durrell-Sullivan Reading Capacity and Achievement Tests, 18 per cent of the boys were retarded as compared to 9 per cent of the girls. Donnelly found significant sex differences appearing as early as the third month of the first grade. Among children brought to the Boston University Educational Clinic for study, the ratio of boys to girls is ten to one.

The causes of the difference between boys and girls in reading achievement have not been established. The fact that girls mature earlier is offset in the first study by the fact that comparisons were based on mental age. Differences in oral-language achievement were equated in the second study. Some of the reasons suggested to account for the difference are: the superior interest of girls in school work; girls "play school" more often than boys and thus receive

extra practice; girls spend more hours in voluntary reading; boys have other more satisfying activities and therefore find reading dull. The fact that differences appear early in grade one would lead one to suspect basic differences in boys and girls in readiness for reading.

### PHYSICAL BASES OF READING RETARDATION

Reading retardation arises from a number of causes: physical deficiencies, mental immaturity, and confusions developed during the learning process. Physical deficiencies include special sensory defects such as poor vision and hearing, or more general bodily conditions such as low vitality due to malnutrition or internal glandular disturbances, which produce inattention. Almost any kind of physical defect may affect the child's school work. Medical examinations of children attending the Educational Clinic of Boston University have revealed cases of chorea, rheumatic fever, malnutrition, low metabolism, as well as the more usual physical defects.

### SENSORY DEFICIENCIES

A child who fails to learn to read should have a thorough physical examination, including a careful check of vision and hearing. Defective vision or hearing might easily be the sole cause of a reading difficulty. The more common eye defects among children with reading difficulty are far-sightedness, muscular imbalance, and astigmatism. Near-sightedness occurs very rarely among children with reading difficulty. Other visual factors that may have some relation to reading difficulties are size of retinal fields, differences in ocular images, extreme sensitivity to light, and disease or fatigue factors which make persistent visual attention difficult. The usual school eye test — reading the Snellen chart at a distance of twenty feet — reveals only

nearsightedness, the other defects of vision not being revealed by this test. Eames<sup>7</sup> and Betts<sup>8</sup> have made available improved eye tests for survey use in schools.

In the face of acute physical deficiencies, increased instructional effort on the part of the teacher may produce little improvement. However, it is a mistake to suppose that all children with reading difficulty have physical difficulties. Among the children studied at the Educational Clinic less than one in ten showed uncorrected physical defects. The ratio would probably be much higher in communities where adequate medical care was not available.

### READING DISABILITY AND SPECIAL MENTAL FUNCTIONS

In the past a great deal of mystery has been thrown about "non-readers" and "specific reading disability" by some psychologists and psychiatrists. Diagnoses have been conducted by many complicated tests of such functions as "visual and auditory memory span," "visual analysis and recognition," and "form-sound-meaning association." From these tests conclusions have sometimes been drawn that the child has faulty associational tracts in his brain. Such tests, composed of material that has little meaning for the child, are not to be trusted to produce evidence of associational weakness. A child may have an excellent memory for batting averages of major league baseball players, but an extremely poor one for the succession of English kings. Learning is highly specific and is influenced by many conditions; it is therefore unwise to draw inferences from one field and apply them to another.

Similarly, mystery formerly surrounded the "reversal tendency" in reading, which had been attributed to mixed

<sup>7</sup>Eames, T. H. *Eames Eye Test*. World Book Company, Yonkers-on-Hudson, New York.

<sup>8</sup>Betts, E. A. *Ready-to-Read Tests*. Keystone View Company, Meadville, Pennsylvania.

lateral dominance. This is a condition in which a child is left-handed and right-eyed or vice versa. It has received much emphasis in the literature of reading disability, but it now appears to be relatively unimportant. It is true that many children with reading difficulties show hand and eye confusions. However, surveys show that almost an equal per cent of normal readers have similar confusions. As to reversals, first-grade teachers know that almost all children confuse *on* and *no*, *was* and *saw*, as well as *b*, *d*, *p*, and *q*, but later overcome the difficulty. Most teachers find that the difficulty with the "wh" and the "th" words is more severe and persistent than the reversal problem.

While specific associational defects may be significant, at present there is little evidence that they contribute much to the solution of reading difficulties. It is safe to assume that a child with good eyes and ears, with no physical handicaps to upset his attention, and with a mental age of at least six years can learn to read.

### EMOTIONAL CONDITIONS AND READING DIFFICULTIES

The reading of an occasional child may be affected by general emotional conditions. However, the emotions of children are usually attached to some specific situation, and the fact that a child is discouraged, confused, or rebellious in one or more phases of his activity does not necessarily make it impossible for him to find delight in another. The only uniformly successful way to remove an emotional blocking that interferes with reading is to provide the child with a carefully graded and well-motivated remedial program.

Parents often are blamed for the poor attitudes which children exhibit. A few teachers take a gossipy delight in pointing out that the child is not disciplined at home and that his inattention comes from this source. At other

times too severe discipline in the home is assigned as the cause of slow learning. Attention should be called again to the specific nature of emotional reactions; that a child dislikes one person does not prevent him from liking another. In general, it is just as well not to interfere with parental problems. It must be remembered that the parent believes that his methods are for the child's good, and that the parent's concern for the child is much greater than the teacher's since parental responsibility is more permanent.

The child's emotional reaction toward reading may give much trouble. After several years of unsuccessful attempts at learning to read, various undesirable attitudes are to be expected. The motivation program is always of primary importance in remedial reading.

### THE LEARNING PROCESS IN RELATION TO READING

Confusions, difficulties, and faulty habits that arise during the learning process must be met primarily by the teacher. In the early school years are developed the combinations of difficulties that handicap children in later reading. A child may learn incorrectly so many things that one wonders that he learns to read at all. No other school subject depends upon such a variety of basic skills.

The teacher's task is to discover the ineffective habits and confusions which make progress difficult, remove them, and so render the child's reading efficient and pleasurable. Sometimes confusions are so complex that considerable ingenuity and much time are required to plan the lessons needed for improved reading. Yet experience shows that a child in good physical condition and of a mental age sufficient for reading can be taught to read.

While many factors discussed later in this chapter may be conditions rather than causes, learning is so complex that we can rarely determine the reason for a particular faulty

habit. Elimination of the faulty habit enables the child to read, and we seem justified in assuming that we have found the cause of the poor reading.

### CHILD DEVELOPMENT AND READING DIFFICULTIES

#### SLOW LEARNING RATE

Very frequently a child's rate of learning is too slow for him to keep up with the class. It is generally agreed that a mental age of six years is necessary to make normal progress in beginning reading. Children who enter first grade with a mental age lower than six may learn to read, but they usually require a greater amount of practice. Ordinarily these children fall behind in the first week of school and never catch up.

#### POOR SPEECH HABITS

A fairly frequent cause of poor reading is inability to give clear-cut pronunciations of words. Very timid speech, accompanied by a high-pitched voice and low volume, is occasionally found. Lispering and other defects in articulation are more common. With such handicaps a child is less likely to feel the security that makes for pleasure and success in beginning reading.

#### INADEQUATE VOICE AND ENUNCIATION

While for ordinary purposes a child's speech may be perfectly clear, in the more formal oral reading his enunciation may be quite inadequate. Just as the adult who inattentively mumbles the name of a person to whom he has been introduced cannot remember the name later, the child who habitually enunciates words poorly often has difficulty in remembering the words.

Faulty enunciation often develops when the child sounds



out words by himself or is prompted on difficult words in oral reading. Sometimes a correct but "vacant" pronunciation indicates that the child has divorced the word from its meaning and is merely "parroting" sounds. A very high-pitched, monotonous voice is common to children with reading difficulties. While an unnatural voice is not a cause of reading difficulty, it indicates an emotional strain that serves to block attention and slow up the progress of reading. Chronic faulty enunciation has appeared to be a chief factor in a few cases of reading difficulty. As the enunciation difficulty was cleared away, the reading improved rapidly.

### INATTENTION IN GROUP WORK

Some children are bewildered or excited by the presence of others and cannot attend closely to class work. Some are timid and self-conscious, tending to withdraw from group work. A few children have never learned to concentrate on any activity for a considerable period of time; they find reading monotonous and withdraw their attention from it. However, lack of concentration is more often a result than a cause of reading difficulty. If inability to attend is shown only toward reading, the cause probably lies in the low motivation of the work rather than a basic difficulty.

### BEGINNING WORK AND READING RETARDATION

#### FAULTY CONCEPTS OF THE NATURE OF READING

Most children are read to at home from picture books. They quickly learn the story by heart, and thereafter "read" the story by looking at the picture and reciting. Usually they learn that reading is a different process. A few children, however, having been successful in reciting

## *BASIC READING ABILITIES*

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stories, cannot understand the need for remembering separate words in the classroom. They patiently wait until stories are read aloud, then memorize them. By the time this process becomes inadequate, they are often too far behind to keep up. Other children view reading of individual words as a "guessing game" and answer at random without looking at the words. They cannot understand why their classmates are so lucky at guessing.

### PRIMARY-GRADE CONFUSIONS

From the first year's work the child often derives only confusions, discouragement, and a very limited sight vocabulary. He may spend a second year in the first grade and, handicapped by the confusions of the previous year, have no greater success. Then he is rewarded for his two years in the first grade by promotion to the second grade. There the work is still more difficult and chances of his success very small. Unless he is fortunate in "getting the hang" of reading, a long plateau of no progress results and the child and his teacher are resigned to failure. The materials he wants to read are too difficult and those he can read are too childish.

### ABSENCE FROM SCHOOL DURING FIRST YEAR

Loss of school time during the first year is one of the commonest causes of reading difficulties. At no other time in school is long absence so disastrous. Childhood diseases result in absences of a few weeks, during which a pupil may miss many of the words in a rather limited vocabulary. A short test on the words taught during the child's absence will reveal the loss and indicate the extra work necessary to overcome it. Disappointment and difficulty from meeting many unknown words in reading leads to confusion. Failure soon follows, and reading trouble has begun.

### DIFFICULTIES RELATED TO WORD MEANING AND PERCEPTION

#### FAILURE TO UNDERSTAND WORD MEANINGS

A frequent cause of reading difficulty in middle grades and in foreign-speaking communities arises from the pupil's lack of knowledge of word meanings. Every word is the center of a variety of associations. A child who has never seen a boat will associate few ideas with the word, while a youngster in a fishing village will know many types of boats and the merits of each. A word with few associations is difficult to "fix" sufficiently for permanent retention. The value of activities and visual methods prior to reading is to give words more color, thus making learning easier. Children have similar difficulties with the meaning of sentences. Some children "turn off" their attention when a sentence is more than a few words long, even though all the words are familiar.

#### INADEQUATE PERCEPTION OF PRINTED WORDS

This is a frequent cause of reading difficulties. Many children see only parts of the peculiar-looking words that they are asked to learn. They notice only a few letters of the word or its chief characteristics. This faulty word perception is often persistent, being common in middle and upper grades as well as in beginning work.

#### DIFFICULTIES IN QUICK RECOGNITION

Successful reading demands instantaneous recognition of a large proportion of words. If a child must view each word separately or if he recognizes it slowly, good phrase reading is impossible. Many children who are skillful in analyzing words continue the habits of analysis in their

reading. The result is slow reading and poor comprehension of larger units of material.

Some causes of difficulty in word recognition are:

- a. Inadequate perception of the word.
- b. Too rapid introduction of new words for the child to become familiar with them.
- c. Too many words with similar elements introduced at one time. The difficulty with the "wh" and the "th" words — *which, when, what, where, and these, then, they, there, etc.*, is known to every teacher.
- d. Too few associations of meaning — too little "color" — around the word. Aviation-minded children will have little difficulty in immediately fixing the words *propeller, airport, hydroplane*, but may have great difficulty with such words as *enough, certain, order, etc.*
- e. Overemphasis on word analysis. One should never regard learning as complete when the child has pronounced a word correctly once. The analysis of a word should always be followed by some sort of quick-recognition exercise.

### DIFFICULTIES IN WORD ANALYSIS

Word analysis is also a frequent cause of reading difficulties. Many children are unable to solve new words by themselves. It is obvious that a child must have some method of analyzing new words. The child needs direction in this process. The most common difficulties in word analysis, through either sounding or word-comparison methods, are as follows:

In sounding methods:

- a. Inability to give sounds of many letters or blends.
- b. Sounding slowly or by such small units that there is no carry-over from one sound to the next.

- c.* Looking away from the word and guessing on the basis of the last sound.

In sight methods:

- a.* Incomplete observation of the word.
- b.* Random guessing at the word from general appearance.

In either method:

- a.* A slurring enunciation of a word or of a nonsense word that resembles the original.
- b.* A resigned or helpless attitude toward any possibility of success at word solution.

A more detailed study of a child's errors in analysis will often reveal:

- a.* Vowel errors, some phonetically correct and some incorrect.
- b.* Consonant errors.
- c.* Reversals of letters — *b, d, p, q*, and letter sequence difficulties such as *was* and *saw*, *form* and *from*.
- d.* Addition of sounds — at the beginning, middle, or end of the word.
- e.* Omitting of sounds, as above.
- f.* Substituting a whole new word that is similar in form or similar in idea to the original word.
- g.* Pronouncing nonsense words or words dissimilar to the original word in form or idea.

### INABILITY TO DISTINGUISH PHONETIC ELEMENTS

The child may pronounce words correctly but fail to notice the sound elements that make up the words. He has difficulty in finding words that rhyme, and when he hears them is uncertain as to which words have the same initial sounds or contain similar sounds.

Most mature readers are able to visualize new words they hear. Children who have difficulty in distinguishing phonetic elements of words are unable to visualize, since they cannot match sound elements and printed elements. Such children will need ear-training exercises in connection with word analysis.

### DIFFICULTIES IN PHRASE READING

Word-by-word reading is common among primary-grade children with difficulties in reading. In higher grades this difficulty is often evidenced by many eye movements in each line of reading. The good adult silent reader has instantaneous recognition of phrases, each eye movement taking in several words, with several eye movements per second. The child with poor habits of phrase reading makes more than four eye movements per line, as well as unrhythmic, irregular pauses or regressive movements — jumping back within the line. The causes of lack of ability in phrase reading are:

- a. Inadequate word recognition, as previously discussed on pages 289 and 290.
- b. Over-attention to visual analysis of the word. One child described her difficulty as, "I pay so much attention that I forget what I'm reading."
- c. Habitual repetition of words in oral reading, and regressive eye moments in silent reading caused by insecurity.
- d. "Keeping one's place" in silent reading while listening to oral reading. There may be some benefits derived from this practice, but certainly many bad habits of slow reading can be laid to this source.
- e. Lack of attention to thought units, which results in incorrect phrasing.
- f. Following line with finger while reading.



### SPECIAL DIFFICULTIES RELATED TO ORAL READING

In addition to word and phrase difficulties already discussed, some children exhibit the following poor habits in oral reading: ignoring punctuation, habitual repetition of words and phrases, adding and omitting words, miscalling easy known words, ignoring errors, and inadequate or incorrect phrasing. Poor use of the organs of speech is evidenced in enunciation, pitch and volume of voice, breath control, and other phases of expression. Too great attention to pronunciation and expression may result in meaningless word calling rather than reading. An inadequate eye-voice span makes proper phrasing and expression difficult, while an over-adequate eye-voice span on the part of an excellent silent reader will often cause cluttering of speech in the effort to make the voice keep up with the eyes.

### SPECIAL DIFFICULTIES RELATED TO SILENT READING

Silent reading presents many problems not ordinarily present in oral reading. In silent reading the child works alone and the teacher has no convenient check as to what is going on in his mind. As a consequence he may easily drop into many careless habits. The most prevalent condition among poor readers is chronic inattention. Some children have difficulty in holding their attention through a single sentence of silent reading, while others may persevere for a paragraph or two before their minds turn off. This difficulty is particularly evident when the reading material is abstract or when the sentences are long or involved.

A slow silent-reading rate may result from vocalization or lip movements carried over from oral reading. An

extremely high rate may be in evidence when the child skips difficult words and phrases and gathers only fragments of meaning. Speed drills and mechanical devices for quick phrase perception may induce rapid superficial reading. Even when the basic meaning and perception abilities are present, the child often is unable to adjust his speed of reading to fit the assignment. Some children are unable to skim, while others are unable to read slowly enough for more precise comprehension.

### DIFFICULTIES RELATED BOTH TO ORAL AND TO SILENT READING

Incorrect position of book or of head and body may be allied to poor reading. The book may be held too close to the eyes or at an incorrect angle for good perception. The child may slump forward or downward or may twist into an awkward position. While posture is sometimes overstressed, a slovenliness of any kind may carry over into the reading. Poor posture may indicate lack of interest or of self-assurance, both of which are essential to good reading.

Poor mental imagery accompanying reading may account for many difficulties. This area of reading has received too little attention and we have no objective measures for it. However, it is apparent that some pupils read with such vivid imagery of characters, places, colors, sounds, odors, and various other associations that their reading is an engrossing activity. Other pupils have only indistinct mental imagery and find reading unexciting and barren.

### DIFFICULTIES IN STUDY ABILITIES AND RECALL

While many pupils are able to read attentively, and appear to comprehend as they read, they often experience difficulty in various types of recall. They may be able to answer specific questions or identify the correct response

in a multiple-choice or a true-false test, but be quite unable to give a well-organized and accurate written or oral account without the aid of questions. Oral recall may be impeded by emotional conditions surrounding the recitation, by speech difficulties, or by an inability to organize ideas in speech. Written recall may be handicapped by a slow handwriting rate, by spelling difficulties, and by language-grammar difficulties.

Weaknesses may be found in the ability to organize ideas and to discriminate between major and minor ideas, with a result that either written or oral recall is a collection of loosely associated fragments of the selection. Various types of associational assignments require the child to find applications and examples of generalizations in reading or require other types of thinking. Many children need special help in acquiring these abilities.

## REFERENCES

While the student of reading will find differing opinions in regard to the significance of presumed causes of reading difficulty, points of similarity are more frequent than are differences. Controversy in the practical aspects of remedial instruction is much less than in theories of causation. The references below present the best educational point of view on causes of reading difficulties:

GATES, A. I. *Improvement of Reading*, Chapters V, XI, and XII. The Macmillan Company, New York; 1935.

BETTS, E. A. *The Prevention and Correction of Reading Difficulties*. Row, Peterson & Co., Evanston, Illinois; 1936.

This is a most readable discussion of the causes of reading difficulty. Its survey of the educational and physical causes is well balanced and clearly presented.

National Society for the Study of Education. *Thirty-Sixth Yearbook*, Part I. *The Teaching of Reading: A Second Report*, Chapter XIII. Public School Publishing Company, Bloomington, Illinois; 1937.

WITTY, PAUL, and KOPEL, DAVID. *Reading and the Educative Process*, Chapters VI, VII, and VIII. Ginn & Co., Boston; 1939.

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## CHAPTER 13

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### ANALYSIS OF READING DIFFICULTIES

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THE analysis of pupils' difficulties in reading ordinarily requires use of only the tests described in Chapter 2. Such informal tests and observation charts usually indicate the correct level on which to start remedial instruction, the specific reading abilities in which the child is weak, and the faulty habits and confusions which must be overcome in the remedial program. When such tests are properly used, it is usually unnecessary to refer many children to reading specialists or clinics for further analysis. More than three thousand children with reading difficulties have been examined by the writer and his associates over a fifteen-year period. In the case of at least 75 per cent of these children, no more detailed examination than that provided by these informal tests would have been required to locate the sources of the difficulties.

As a rule, the examination at a reading clinic or by a specialist differs from the testing program described in Chapter 2 primarily in the use of more detailed and more precise measurement and observation. In place of certain of the informal tests, individual diagnostic and achievement tests are employed. Some reading clinics use measuring instruments such as precision tachistoscopes, eye-movement cameras, stereoscopes, handedness tests, and other devices. While these instruments often yield worthwhile supplementary information about the child's reading, none of them is indispensable in the analysis of reading difficulty. Certain reading clinics include in their diagnostic efforts psychiatric examinations and detailed social histories, which

yield interesting bits of personal history but rarely provide information significant to the remedial program. The analysis of reading difficulties is primarily an *educational* task, and is best done by an experienced teacher who knows the essential elements in reading instruction. The only outside assistance required is that of thorough medical examinations, with special emphasis on sight and hearing.

The detailed analysis of reading difficulties usually includes the administration of measures of mental capacity for reading, measures of reading achievement, the observation of faulty habits in reading, and the consideration of certain items in regard to school and home background. If eye and ear examinations have not been given, tests to detect possible difficulties in sight and hearing should be used. The plan for analysis of reading difficulties outlined in this chapter includes only those items that are important in planning a remedial program. Certain more elaborate tests might be recommended for research purposes, but for most practical purposes the plan suggested here will be found adequate.

### EXAMINATION FOR PHYSICAL AND SENSORY DEFECTS

Before any intelligence or reading test is given to a child with reading difficulties, a careful medical examination should be made. The child may have a physical condition which seriously affects his performance on such tests. The medical examination will reveal no serious physical defects in the majority of children with reading difficulty, but in certain cases the medical findings are so important as to indicate that the educational difficulty may be only a minor manifestation of a problem which is essentially physical. Inattention and lack of persistence, which appear in spite of apparently good motivation, are sometimes found to be based upon visual defects, hearing loss, low metabolism, chorea, rheumatic fever, malnutrition, etc. Teachers often

are reluctant to insist that parents spend time and money on sensory and medical examinations, since some parents feel cheated if the examinations reveal no defects. However, unless such examinations have been made, the teacher can never be sure that the remedial program will be unimpeded by a physical handicap. The school nurse and school physician often give invaluable help in cases of educational failure.

The visual tests of the Betts Ready-to-Read Tests or the Eames Eye Tests, mentioned in Chapter 12, will reveal the presence of many of the visual defects common to reading difficulty. While some ophthalmologists frown upon the use of eye tests by teachers, the majority understand that the tests are designed to discover defects which would otherwise go undetected. A complete eye examination should be made by a competent eye specialist in all cases of reading difficulty, but if such an examination has not been made, the improved school eye tests mentioned above will be of value.

### MEASURING CAPACITY FOR READING

The measure of mental capacity most commonly used in cases of reading difficulty is the Stanford-Binet Test.<sup>1</sup> This is an individual test which requires about an hour of testing time and which should be given only by an examiner who has been carefully trained in Stanford-Binet testing. Most universities offer courses in intelligence testing, which include training in the administration and scoring of this test. Any teacher who expects to specialize in the correction of educational difficulties should have such training.

Another suitable measure for discovering how well a child should be able to read is the Durrell-Sullivan Reading Capacity Test. It is simple to give and children always respond well to it. It measures hearing vocabulary by

<sup>1</sup> The equipment for this test may be obtained from Houghton Mifflin Company, Boston, Massachusetts.



## ANALYSIS OF DIFFICULTIES

having the child find pictures corresponding to words read by the examiner. Understanding of paragraphs read aloud is also measured by picture tests. The scores from the two tests are combined to derive an age or grade level for the child's hearing comprehension. It is assumed that if a child has no visual defects he should be able to learn to understand written language as well as he understands spoken language.

When using the Stanford-Binet Test for measuring mental capacity, the mental age is used rather than the IQ. For example, an IQ of 80 is often considered to be very poor. Yet a twelve-year-old child with this IQ has a mental age of nine years seven months, which would indicate that he should be able to read on an average third-grade level. If he is reading on a first- or second-grade level, he should be considered a suitable candidate for remedial instruction. The criterion for eligibility for remedial instruction is usually the difference between the reading age and the mental age.

A consideration of the table below will illustrate the use commonly made of the Stanford-Binet mental age or the Durrell-Sullivan hearing comprehension level in relation to reading.

	GRADE	AGE	MENTAL AGE OR HEARING- COMPRE- HENSION AGE	READING AGE
Albert . . . . .	4	11	8	8
Henry . . . . .	5	12	11	9
Carl . . . . .	4	9	11	6
James . . . . .	5	10	14	12
Frederick . . . . .	3	8	4	0

Although Albert is eleven years old, his capacity for reading is only that of an eight-year-old, so that he would not be considered a good candidate for remedial instruction. Henry has a reading capacity of eleven years, but a

reading age of only nine years. He would be considered a good candidate for remedial instruction, even though he is below average in mental ability. Despite a capacity two years in advance of his chronological age, Carl is reading on a first-grade level. The difference of five years between his capacity and his achievement means that rapid gains should be expected from a remedial program if no physical handicaps are present. Frederick is apparently a very dull child who is not yet ready for reading instruction.

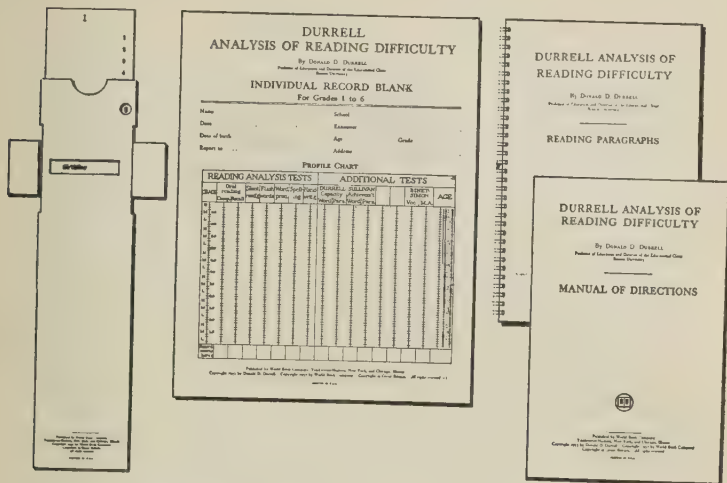
No test of mental or reading capacity is infallible. It is likely that mental tests or hearing-comprehension tests are occasionally affected adversely by poor motivation, temporary physical debility, confusions, or other factors. The wise examiner will use the term "apparent" or "obtained" before any terms dealing with mental capacity, especially when the capacity appears to be low. The fact that the child is achieving up to his low capacity score does not mean that he should be deprived of remedial instruction. However, with many pupils needing help, those pupils should be first chosen for remedial instruction who have the greatest chance of rapidly attaining a normal achievement level. When such pupils have been provided for, those with lesser capacity may be included in the remedial program.

### EDUCATIONAL ANALYSIS OF READING DIFFICULTIES

The method of educational analysis of reading difficulty used in the Boston University Educational Clinic is described and illustrated in the following pages. This method, known as the *Durrell Analysis of Reading Difficulty*, includes several individual tests.<sup>2</sup> In addition, results

<sup>2</sup> Materials for the *Durrell Analysis of Reading Difficulty* are published by World Book Company in a form convenient for use in grades one to six. It is suggested that for study of this chapter there be at hand copies of the Individual Record Blank, the Reading Paragraphs, the Tachistoscope and Cards, and the Manual of Directions. The following descriptions of method are adapted from the Manual of Directions (copyright 1937 by World Book Company).

# ANALYSIS OF DIFFICULTIES



## MATERIALS OF THE "DURRELL ANALYSIS OF READING DIFFICULTY"

from group tests, both standardized and informal, are utilized.

The *Durrell Analysis of Reading Difficulty* consists of a series of standardized word lists and reading selections, a quick-exposure device (tachistoscope) with accompanying test cards, a carefully worked-out individual record blank for recording the results of the examination in a systematic way, and a detailed manual of directions for the teacher. A stop watch is highly desirable, and if it is not available, a watch with a second hand is absolutely necessary for timing of the tests.

## GENERAL SCOPE OF THE ANALYSIS

Oral-reading achievement is measured by a series of graded paragraphs. Faulty habits of reading are observed incidentally and recorded on the individual record blank. A second set of paragraphs is provided for measuring un-

aided oral recall and as a further check on general oral-reading habits.

Silent-reading achievement is also measured by a third set of graded paragraphs, which are equal in mechanical difficulty to the oral-reading paragraphs. Comprehension of the silent-reading paragraphs is measured by a series of carefully selected questions. Bad silent-reading habits, such as lip movements, etc., are observed and recorded. Ability to recall the content of a paragraph when read silently is measured by a fourth set of paragraphs comparable in difficulty to the others.

Word-recognition and word-analysis skills are observed by first presenting words in a quick-flash device, the tachistoscope, and then by allowing the child to analyze the words which he did not recognize on flash presentation. A phonetic inventory test is provided for children who have severe difficulty in word analysis and recognition.

Supplementary tests in spelling and writing rate and written recall are given for optional use. If the use of the *Durrell Analysis of Reading Difficulty* is preceded by use of the Durrell-Sullivan Reading Capacity and Achievement Tests, these supplementary tests need not be given.

### STANDARDIZED METHOD

These tests have been standardized on approximately one thousand children. After the standardization, approximately three thousand tests were given to children with reading difficulty over a period of four years. In this extensive use, the norms were found to check satisfactorily against other reading tests. Since this test is essentially a method of standard observation of errors and faulty habits in reading, the check list of errors is more important than the norms.

The check list of errors will be found to include all the significant errors made by any child. It is based on the

errors discovered in the reading of the four thousand children noted above.

The procedure to be followed in carrying out the *Analysis of Reading Difficulty* calls for experience on the part of the teacher. A teacher unacquainted with the methods and objectives of teaching reading will have difficulty in using the method of analysis intelligently.

### PHYSICAL CONDITIONS AND TIME

The examiner should work in a quiet room with good lighting. Care should be taken not to permit shadows or bright light to fall on the reading materials. The examination should be given in the morning before fatigue has set in. If the child does not feel well physically, the analysis should not be made. If the child normally wears glasses, he should be required to wear them when he is tested. Care should be taken not to spoil the rapport between the examiner and the child by taking him away from classroom activities which he particularly enjoys, or by testing him during his playtime.

A minimum of thirty minutes is required to make the analysis. In the beginning the examiner will probably require a longer time. It is well to plan to spend an hour on the test, so that the pupil may be shown his difficulties and be given advice on methods of overcoming them. When this is done, the examiner must indicate confidence in the pupil's ability to overcome his difficulties.

If an examiner intends to make analyses regularly, it is strongly recommended that a stop watch be provided. If a watch with a second hand is used in the place of a stop watch, accurate timing will be made easier by noting the time of beginning and ending each test. Note the time in hours, minutes, and seconds, thus: 9:42:15 – 9:44:40 = 2:25. This indicates that the test required 2 minutes and 25 seconds.

### CHECK LIST OF DIFFICULTIES

The most helpful information on which to base recommendations for remedial work will come from the check lists of difficulties found in the individual record blank. Each check list should be carefully and thoughtfully considered, so that no important source of difficulty will be overlooked. Every effort has been made to make these check lists sufficiently inclusive to cover the great majority of reading difficulties.

### SHORTENING THE ANALYSIS

Experienced examiners may find it possible to shorten the analysis in the following ways:

- a. The oral-reading tests for comprehension and recall may be coalesced, using the second set of oral-reading paragraphs only. The check list of observations on the first set of paragraphs may be filled out by careful observation during the reading of the second set of paragraphs.
- b. By carefully noting the level of reading ability as shown on the oral-reading paragraphs, the examiner can reduce the number of paragraphs which must be read in the silent-reading test.
- c. In the word-recognition and word-analysis tests the examiner may give only the number of words needed to indicate the child's general level of ability and the type of difficulty he is having. In other words, it is not absolutely essential to establish exact scores on these tests.

*Beginning examiners should not attempt to shorten the test.* So many factors are observed in each test that it is difficult to make adequate observations without giving the complete test until the examiner has a great fund of general experience upon which to draw.



## ANALYSIS OF DIFFICULTIES

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### USING THE "ANALYSIS OF READING DIFFICULTY"

Specific directions for administering and interpreting the *Durrell Analysis of Reading Difficulty* are contained in the manual of directions for the published materials. The following summary of procedures for the several tests of the *Analysis* has been adapted from that manual.

#### ORAL READING — COMPREHENSION

The child is called upon to read aloud at least three appropriate selections from the specially prepared and graded reading paragraphs. If the child makes two or more errors in the first paragraph presented, he is given easier paragraphs until he reads one without error. Then he is given more difficult paragraphs until seven or more errors are made. Thus are lower and upper levels established. The child is encouraged to do the best he can, and as soon as he has finished reading he is asked comprehension questions provided in the individual record blank.

The time required for reading, and the number of questions answered correctly, are recorded. During the reading, record is also made of the extent of phrase reading, hesitation on words, mispronunciation, omission of words, repetition of words, unknown words, insertion of words or syllables, ignoring punctuation, and voice enunciation and expression. The eye-voice span is observed by sliding a card over the text while the child is reading orally and determining how many words he can say after the text is covered.

Grade norms are provided, based on a time-and-error record.

#### ORAL READING — UNAIDED ORAL RECALL

The child reads paragraphs of the same level of difficulty which he read in the preceding test. A record is kept of

the time and of errors made during the reading, somewhat similar to that for the preceding test. When the reading is completed, the child is asked to tell everything that he can remember in that story. All ideas recalled voluntarily are checked, and minor errors are ignored. Inaccuracies in recall are also recorded. When the child is unable to recall anything more, he is asked specific questions, and a record is made of memories omitted in voluntary recall, which can be recalled upon prompting. This checks upon whether omission is due to poor expression or to inattention or low comprehension in reading.

Grade norms based on a time-and-error record are provided. On the paragraphs suited to his reading level, a child's combined total of memories on unaided and prompted recall should be approximately 75 per cent of a perfect score.

### SILENT READING — UNAIDED ORAL RECALL

The object of this test is to compare difficulties in silent reading with those in oral reading of material of equal mechanical difficulty. The child is therefore given paragraphs of the same levels of difficulty as those read in the preceding tests. The child reads a paragraph silently just once. The time required for reading is recorded, and recall is checked in exactly the same manner as in the preceding test.

In this test observation is made of mechanics of silent reading, such as lip movements, whispering, and eye movements. The number of eye movements per line is counted as accurately as possible while observing the child over the top of the card that he is reading. Practice in observing the eye movements of good readers will give the observer a basis for evaluating a child's performance.

With this test there is also a check list for comparison of oral and silent reading to insure that attention is called to

the problem of whether habits in the two types of reading are the same and are therefore likely to respond to the same remedial treatment, or whether they are quite different.

Time and memory norms are provided. In case there is a discrepancy between time and memory grade equivalents, a grade score halfway between should be assigned.

### FLASHED WORDS — WORD ANALYSIS

For this test separate lists of words are used for the first grade and for grades two to six. A list of words suited to the child's reading ability is first presented in the tachistoscope. The time of presentation should be about one-half second, so that the child has just one look at the word. Record is made of each word pronounced correctly, and mispronunciations are recorded. If a child fails in the Flash Test, the shutter of the tachistoscope is opened and the child is allowed to study and pronounce the word. A separate record is made of correct responses and mispronunciations as a result of this analysis. Each graded list of words provided contains 25 or 26 words, and the child is presented successively more difficult lists until ten successive failures in both Flash and Analysis have been recorded, or the hardest list has been completed.

Provision is made for a detailed analysis of difficulties in recognition and in pronunciation. Grade norms are provided.

### PHONETIC INVENTORY

This test is designed to be given to all children who have difficulty in word analysis. Pupils who make scores about third grade on both the Flash and Pronunciation Tests may be excused from this test. A card containing various letters of the alphabet is shown, and the child is asked to tell the names of the letters. The card also contains consonant blends which are used similarly.

## *BASIC READING ABILITIES*

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### ANALYSIS OF FAULTY PRONUNCIATION

In connection with the Flashed Word-Word Analysis Test, a table is provided whereby the examiner who wishes may make a detailed analysis of errors in pronunciation. Errors are classified as phonetic or non-phonetic, and the classification is suitable for analysis of spelling errors also.

### SILENT READING — WRITTEN RECALL

This test need not be given if the results of the Written Recall Test of the Durrell-Sullivan Reading Achievement Test are available. From the set of reading paragraphs a selection is made of a paragraph suited to the child's reading ability. The child reads the paragraph once silently, the time of reading is recorded, and he is then asked to write all the story that he can remember. If the child cannot write, this test must, of course, be omitted. The child is allowed all the time he wishes for writing, but record of time is made and writing difficulties observed. Adequacy of recall is made by comparing it with the oral recall. This estimate is adequate enough for this analysis.

### DIFFICULTIES IN SPELLING

If results on another spelling test, such as that of the Durrell-Sullivan Reading Achievement Test, are available, this spelling test need not be given. Two lists of 20 words are provided, one for grades two and three and one for grade four and above. Each word is pronounced, an illustrative phrase or sentence is read, and the word is repeated.

Grade norms are provided for the test, and provision is made for checking common causes of spelling difficulty, such as omission or addition of sounds or syllables, slow

writing, phonetic or non-phonetic spelling, and lack of understanding. The check list for analysis of faulty pronunciation provides a basis for a more detailed analysis of spelling errors.

### HANDWRITING

In the first grade the child is asked whether he can write any words, and if he can he is told to write two or three. He is also asked to write from dictation several letters of the Phonetic Inventory Test. In the second grade and above the child is given one of the easier reading paragraphs which he has read, and is asked to write as much of it as he can. Time is called at the end of one minute. A check list of difficulties is provided on the individual record blank, and grade norms based on letters per minute are given.

### INFORMAL TESTS

There are a number of habits and skills in reading which cannot yet be measured satisfactorily by means of standardized tests but which can be measured satisfactorily by informal tests. Such informal tests as are described in Chapter 2 may be utilized in making an individual analysis in the following areas:

- a. Reading interest and attitude, including amount of voluntary outside reading.
- b. Word skills employed by the child in his silent reading.
- c. Study skills, including detailed reading, skimming, associational skills, and ability to use the dictionary and table of contents.
- d. Suitability as to reading difficulty of the materials used in the child's classroom instruction.

### SUMMARIZING THE ANALYSIS

The results on the several Reading-Analysis Tests, as well as data from other tests, are conveniently summarized on the profile chart on the first page of the individual record blank. It is convenient also to have available for quick reference a summary of the check lists of difficulties for the several tests. Such a summary check list is provided on the second page of the individual record blank. On the third page of the blank is provided space for a summary of other pertinent information, such as school record, medical record, and psychological factors. In making any analysis of reading difficulties, it is always advisable to assemble in summary form all facts that may have a bearing upon the case.

### REMEDIAL PLANS

The individual record blank of the *Durrell Analysis of Reading Difficulty* provides space for brief notes on the remedial program to be followed. A testing program for an analysis of difficulties is of little value unless it is followed by a teaching plan designed to provide for the needs disclosed by the testing. Some of the major items to be considered in planning a remedial program, which are discussed throughout this book, are summarized in the following pages.

### MATERIAL SUITED TO THE CHILD'S LEVEL

Children are thrown into constant confusion by materials in which the word-recognition or word-meaning burden is much too great. A method of determining the suitability of materials is suggested in the discussion of informal tests in Chapter 1. In the average classroom it is usually found that at least five levels of instructional material are necessary. Good results are obtained when small groups of five



or six children are working under pupil-teachers with lesson plans adapted to their level and needs. Extensive silent reading in properly graded material also yields satisfactory results.

### ADEQUATE MOTIVATION

The following types of motivation have been found to encourage attentive independent reading:

- a.* Purposive reading in which the child has an interesting task in mind, such as contributing his part to a class project, constructing some object, or furthering some plan of his own.
- b.* Selecting interesting material or providing interest through supplementary activities and enrichment.
- c.* Showing the child his progress by the use of objective records of gains, such as charts showing increase in speed of reading, lists of new words added to his sight or meaning vocabulary, increase in accuracy on daily tests, increased power in mastery of difficult words, etc. This is best accomplished through careful planning, in which new skills acquired are immediately practiced in the following lessons.
- d.* Providing a variety of types of lessons so that fatigue or inattention will not appear. For some children a half hour's work will need to be broken into six or eight sections, while others may need only a single assignment for that time.
- e.* Encouraging a child by brief comments on his work and by showing him how he may overcome his confusions and difficulties.

### ANTICIPATING WORD DIFFICULTIES

While there are many factors involved in comprehension difficulties, the chief trouble comes from word meaning

and word recognition. Daily lessons should be scanned for difficult words and adequate instruction provided *before* the lessons are read. In addition to these exercises for immediate use in the day's lesson, instruction should be given in some form of word analysis. The type of word analysis to be used depends upon the type of error the child makes.

### HELP IN COMPREHENSION OF LONGER UNITS

While much of the trouble in comprehension is cleared up by providing well-motivated material of the proper reading level and by the preliminary word-recognition and word-meaning exercises, some children need additional help in comprehension of longer units of material. More attentive reading is often obtained by giving a child study questions prior to his reading. In extreme cases a question may be required for each paragraph which the child reads.

### INCREASING THE SPEED OF SILENT READING

A child's speed of silent reading may best be increased by giving short speed tests two or three times a week. The test must always be accompanied by comprehension questions in order to maintain attentive reading. Severe difficulties are helped by phrase drills or by overcoming lip movements and vocalization. Extensive reading of well-motivated easy material is the most natural means of acquiring speed in reading.

### OVERCOMING FAULTY HABITS IN ORAL READING

The items dealt with in Chapter 2 and in Chapter 6 will require attention. The use of phrase drills will help correct many difficulties, as will the reading of poetry or dramatized materials.

## ANALYSIS OF DIFFICULTIES

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### GRADED EXERCISES ON STUDY SKILLS

There are three general classifications of reading skills which need attention in the classroom: (1) thorough reading, in which the child is expected to master the entire contents of the material read, (2) incomplete reading or scanning, in which he is to get only the general idea or to locate specific units of information, and (3) associational reading, in which he reads with a problem in mind such as criticism, comparison, illustration, selection, enriched imagery, etc. In addition to these skills, attention should be paid to the completeness, accuracy, and organization in written and oral recall of materials read.

### ENCOURAGING INDEPENDENT READING

Children will rarely acquire and maintain facile reading skills unless they read voluntarily outside of school. Any reading program should give attention to the formation of independent outside-of-school reading habits.

### PROVIDING FOR SUPERIOR READERS

The superior reader is often held back by being required to read material which does not challenge his interest or ability. Long-range assignments related to the content subjects will make for purposive reading and will help to enrich the classroom, especially if such assignments are given far enough in advance so that the child may prepare a report at the time the topic is to be discussed in class.

### ANALYSIS OF COMPLETE NON-READERS

Some children with reading disability can read only a few words or none at all. Such children are given the sensory and medical examinations and the Stanford-Binet or the Durrell-Sullivan Reading Capacity Test. The *Durrell*

*Analysis of Reading Difficulty* is too advanced for these children. They require a test which measures background abilities for reading. The Monroe Reading Aptitude Tests<sup>3</sup> yield pertinent information in relation to these abilities. The Monroe battery includes tests of visual and auditory perception, motor coördination, articulation, and language facility. Certain of the tests may be given to several children at once; others should be given individually.

The usual clinical procedure with non-readers is experimental teaching of a small sight vocabulary, following the suggestions for word enrichment and word recognition outlined in Chapter 8. In addition, a program of games and exercises is planned to give the child the essential pre-reading background. The two most important perceptual abilities for learning to read are auditory and visual discrimination of word elements. Auditory perception may be measured as well as taught by the ear-training exercises described in Chapter 9. These may be supplemented by appropriate lessons, such as those found in Monroe and Gray's *Before We Read*<sup>4</sup> or similar materials.

The visual-perception exercises for words and letters described in Chapter 9 are used for teaching visual discrimination of word forms. Copying, tracing, matching, and the use of the typewriter also aid visual discrimination. The typewriter is particularly useful, since it eliminates reversal of letters and aids in establishing correct letter sequences as well as a left-to-right direction in writing and reading. It is particularly useful in teaching lower-case letters, since the child presses a block capital letter and a lower-case letter is printed.

The instructional program is characterized by a careful gradation and variety of short exercises which hold the

<sup>3</sup> Monroe, Marion. *Reading Aptitude Tests*. Houghton Mifflin Company, Boston; 1935.

<sup>4</sup> Monroe, M., and Gray, W. S. *Before We Read*. Scott, Foresman & Co., Chicago; 1938.

attention and establish elementary word-perception abilities. A record of progress in all phases of the program builds self-confidence and aids motivation. This is essentially a "reading readiness" program, and it may be used with good effect in kindergarten and pre-primary classes.

### REFERENCES

The individual diagnostic test battery which has been devised by Dr. A. I. Gates may be found in his *Improvement of Reading*, Appendix I, pages 503-627. The battery contains exhaustive analyses of phonetic and perceptual abilities. Some of the "associative functions" tests of the earlier psychological analysis methods still appear in the battery. The chief criticism of the test is that it requires too much time to administer for the practical help it provides. However, the study of the Gates Individual Diagnostic Reading Test will be advantageous to any advanced student of reading.

The many uses which Dr. E. A. Betts makes of the Ophthalmic Telebinocular in clinical analysis of reading difficulties appears in his *Prevention and Correction of Reading Difficulties*, Appendix B. Chapter V in the same book describes his general procedure in reading analysis.

Perhaps the best approach to the analysis of reading difficulties of complete non-readers or for children reading on a low-primer level is that of Dr. Marion Monroe. Her method is described in her book, *Children Who Cannot Read*, University of Chicago Press; 1932. Her Reading Aptitude Tests, published by Houghton Mifflin Company in 1935, are very helpful with non-readers.

The most elaborate use of questionnaires and interviews for studying needs and interests of children will be found in Witty and Kopel's *Reading and the Educative Process*. Chapters VII and VIII present a discussion of their method of analysis, while their record forms are found in Appendix A. Their method seems more suitable for pupils whose basic reading abilities are fairly well established.

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## CHAPTER 14

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### REMEDIAL-READING INSTRUCTION

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**A**N INSTRUCTIONAL program that provides fully for individual differences in reading should make remedial classes unnecessary. In such a reading program, remedial instruction consists of adjusting materials and methods of teaching to different rates of progress and of overcoming weaknesses as they appear. The child never repeats the instruction of the previous year, but merely continues from the level attained the previous year. Adjustments to learning rate and to individual needs are made at all levels of instruction.

However, such excellent adjustment to individual differences is extremely difficult. When methods or systems of teaching reading provide adequately for differences in learning rate, and when inventory tests reveal all difficulties at each stage of progress, the task will be much easier. At the present time, fitting instruction to individual needs requires more planning than a teacher can justly give to reading or any one subject of the curriculum. Furthermore, so many phases of reading instruction are not understood and so many possible combinations of difficulties may occur that a teacher need not feel incompetent when pupils fail to progress according to their capacities.

The prevalence of special difficulties in reading noted in the surveys reported in Chapter 12 indicates that the problem may not be lightly brushed aside. Even in the most highly motivated learning, such as we find in the various sports, faulty habits and lack of improvement appear. There is apparently no panacea in any field which will assure uniform growth in relation to capacity. While some



educational enthusiasts may feel that "all is perfect" in their particular type of approach, the more realistic educators recognize that we are in the beginning stages of professional development and that need for remedial instruction will be with us for many years.

### TYPES OF CLASSES AND THE TEACHER

Many schools now have remedial-reading classes for children who have good capacity for reading but have not made normal progress. These classes usually take the form of the remedial-reading home room in which the child spends the entire school day. Most of the instruction centers on reading development, although other subjects are taught. Another form of class organization for remedial instruction is the reading laboratory or reading clinic to which pupils go from their regular classrooms for a period of help each day. Either of these two plans may be varied to suit local needs.

Often a room teacher with special training or interest in reading trades her better pupils for children with special reading difficulties during one period of the day. Occasionally classes are combined for part of a day in order to free a teacher for the reading-laboratory type of instruction. A single remedial teacher may serve several schools by giving daily instruction to pupils or by supervising the instruction of groups of children in the regular classrooms. There is no experimental evidence as to which type of organization is most effective.

The teacher of remedial reading should have special training and special aptitude for the work. She must have the ability to get on well with other teachers, with parents, and with children. Successful experience in a regular classroom is an indispensable background for remedial teaching. The fact that pupils in a remedial class are those who have failed to make progress in regular classes should in-

dicating that an apprentice or a beginning teacher should not be selected for such work. The psychologist without teaching experience is usually quite helpless and looks for emotional intangibles rather than improved teaching methods. It is best to choose a teacher who has been successful in instruction in the basic subjects and who has maintained cordial relationships with other teachers. Such a teacher can acquire the ability to analyze difficulties and develop a variety of approaches to remedial instruction by taking university courses or through reading and observation.

### ORGANIZING THE REMEDIAL CLASSES

If remedial classes are to be successful, care should be taken in the selection of pupils and in the initial adjustment to pupils' needs. The remedial teacher should be given time for individual examination of pupils prior to the formation of instructional groups. Children with the greatest promise, as well as the greatest need, should be taken first. The more important factors in the organization and administration of remedial classes are discussed below.

### SELECTION OF PUPILS

All pupils in the school or school system should be given a reading-achievement test and a test for determining their capacity for reading. For the primary grades there are several intelligence tests that involve very little or no reading and these are usually suitable as a rough measure of the child's mental ability or capacity. For grades three to six the Durrell-Sullivan Reading Capacity and Achievement Tests will be found suitable for selecting those children with high reading capacity but low reading achievement. If the mental ability or capacity is high and the reading achievement is low, the child should be referred to the

remedial teacher for more careful examination. The children with the greatest difference between their mental ages or reading-capacity scores and their reading-achievement scores should be the first ones selected for the remedial-reading class. The individual Stanford-Binet test should be used with doubtful cases.

### INDIVIDUAL EXAMINATIONS

All children who are selected for the remedial class should be given careful tests of sight and hearing. A more complete physical examination should also preferably be given, to discover whether or not there are difficulties that interfere with attention.

Each child should receive an individual reading analysis to determine his faulty habits and confusions, as well as his stages of development in the various phases of reading. The procedures described in Chapter 13 will be found suitable for making this thorough examination.

### GROUPING FOR INSTRUCTION

Children with similar levels of reading accomplishment and similar needs in reading should be grouped together for the remedial instruction, and the remedial program should be outlined for each group. There should be specific plans for the following aspects of the work: suitable materials of instruction, adequate motivation, development in word-recognition and word-analysis abilities, growth in oral and silent reading, and improvement in study skills. The methods and devices outlined in the various chapters in this book will be of help in planning the instructional program.

No pupil should be considered as permanently assigned to a single group. Rates of learning will differ markedly in accordance with the intelligence of the children and the severity of their confusions, and there must be some provision for readjustment of the pupils in any group who

make rapid progress or can work better in a group other than the one in which they started.

### COORDINATION WITH REGULAR CLASSES

The adjustment between the work of the remedial teacher and the work of the regular classroom teacher must receive attention. If a child spends only part of the day in the remedial-reading class, his reading instruction in his own home room should be planned largely by the remedial teacher until he reaches such a level of achievement that his learning may conform to that of his home room.

The readjustment to the classroom situation when the child's difficulty in reading is overcome must be made with some care. It is the common practice as the child's reading level reaches that of the class to which he belongs to assign him to the regular class three days a week and to the remedial class two days. Later on he attends the remedial class only one day a week and finally leaves it altogether.

### THE REMEDIAL-READING HOME ROOM

When the child spends his entire day in the remedial classroom, he must be given instruction in other subjects. The remedial-reading home room differs from the regular classroom only in selection of pupils, in precision and variety of adjustment to individual differences, and in emphasis on the language arts. All the methods of providing for individual differences outlined in Chapter 4 are used. Small-group work in charge of pupil-teachers is much in evidence. Guidance in leisure reading and in the use of workbooks and self-instructing games is given. The library is chosen with proper regard to levels of difficulty and correlation of subjects. However, the superior remedial room will differ little from the superior classroom in these respects.

The language-arts subjects call for special attention in

the remedial-reading home room. The basic vocabulary for a group of pupils should be somewhat the same in spelling, in handwriting, and in oral and written composition as it is in reading. This will result in security and confidence rather than in the usual confusion induced by unrelated instruction. History, geography, and science, as well as art and music, should be so developed and integrated as to serve the ends of growth in broad aspects of language skills. The usual activities, such as field trips, exhibits, dramatization, and construction, are a part of the classroom procedure in broadening experiences; lantern slides, motion pictures, and other aids to motivation and development of meanings are used.

The remedial teacher must be permitted a great deal of freedom in choice of materials and methods. The time allotments for the various subjects should be flexible, with much more time devoted to reading and language than is usual in the ordinary classroom. Every provision should be made for rapid growth in reading and language skills, even at the expense of dropping entirely some of the other subjects of the regular curriculum.

### THE REMEDIAL-READING LABORATORY

For the plan of remedial instruction known as the remedial-reading laboratory or clinic, children from regular classrooms are assembled in a special class for thirty to sixty minutes of reading instruction daily. Since the remedial groups are organized on the basis of reading levels, children from several different grades may be in the same group; for example, a reading group on the second-grade level may contain pupils from grades three, four, and five.

The remedial-reading laboratory is equipped with the library materials, games, and devices necessary for correcting the various types of faulty habits which the pupils display. Often it is necessary for the remedial teacher to



plan work for each child to do during the reading period in his classroom. For this reason, self-administering exercises and assignments in great variety are desirable. These materials, when possible, should correlate with the interests in the child's classroom. As the child approaches the normal level for his classroom, the remedial instruction should help him make the adjustments to the regular assignments. If the child's home room is organized around small-group instruction on various levels, the remedial instruction should supplement the work of a suitable group.

Since the remedial-reading groups are assembled for the laboratory at every hour of the day, suitable scheduling is a difficult task. It would be desirable for each child to have his remedial instruction at a time when his class has its reading period. Furthermore, a child should not be taken from an activity that he needs or enjoys. By changing classroom reading periods, and by sacrificing a little in regard to uniformity of the remedial-reading groups, scheduling adjustments can be worked out.

Occasionally the remedial teacher may most effectively assist in teaching or planning for small groups of children in the regular classrooms. She studies the needs of a particular group, teaches them as often as her schedule will permit, and makes suitable lesson plans for the intervening days. She should be able to provide library materials and special exercises suitable for the group.

#### INDIVIDUAL TUTORING

Individual tutoring should be the most effective method of remedial-reading instruction, since it permits a more exact adjustment to the child's needs. Its effectiveness depends upon the ability and willingness of the tutor to make suitable lesson plans and to maintain a high degree of interest on the part of the child.

The tutor should know a variety of approaches to every



type of reading ability. If necessary, the tutor must be willing to write materials in the child's sight vocabulary or divide an hour's instruction into thirty or more short, interesting exercises. A mastery of motivation techniques is especially important. This includes the ability to make a careful adjustment to the child's learning rate, assuring progress without confusion; the ability to make a careful gradation of difficulty of lessons; a knowledge of suitable stories for all levels of ability and maturity; and a recognition of the fact that inattention in a physically well child calls for better lesson planning. Of greatest importance is quickness to sense lack of progress at any stage of learning. Impatience at lack of progress is a greater virtue in a tutor than mere "patience." A good sense of humor helps, and the ability to hold the pupil to high standards of courtesy and posture is important. Successful experience in teaching is very desirable. A person who cannot hold a regular teaching position on account of poor discipline of the class or for almost any other reason seldom makes a good tutor.

People who have had psychological training but no specific work in reading instruction are usually not qualified for this type of work. They may be as helpless in reading instruction as they would be in giving piano lessons without having had musical training. Since they have no knowledge of the elements of reading, they often follow some theory or "system"; and when the child's attention wanders, they usually want to hustle him off to a psychiatrist or make their own diagnosis of his mental blocking.

There should be a close relationship between the tutoring and the work of the school. If possible, the tutoring should be done at school, preferably during the child's regular reading period. Reading materials may often be related to the special activities being carried on in the classroom. If the child is able to join any reading group in his class, he should be permitted to do so, although tutor-

ing should be carried on until he reaches the level of reading ability of which he is mentally capable. When the child is expected to transfer back to the regular reading instruction of the classroom, the tutoring materials should be the regular textbooks; the transfer to the classroom should be made gradually.

Really good reading tutors with records of successful corrections are difficult to find, since their excellence in teaching leads them into regular positions where their income is more secure. The skill and amount of time required in preparation of lessons makes tutoring rather expensive. Competent tutors in large cities usually receive two to three dollars an hour or per lesson.

#### THE UNIVERSITY EDUCATIONAL CLINIC

The Educational Clinic of the Boston University School of Education centers its attention primarily on teacher education and on research in materials and methods of analysis, correction, and prevention of educational difficulties or disabilities. Its graduates are placed as remedial teachers, elementary supervisors, school psychologists, critic teachers, and college instructors. The children in the clinic are chosen for their suitability to demonstrate different types of instructional needs or for the severity or unusual nature of their reading handicap.

Since it is desired that the graduates of the clinic be not only excellent technicians but also competent students of basic principles and research techniques and findings, the enrollment is limited to fifteen graduate students with superior records of teaching experience and academic success. Applicants are required to submit recommendations as though they were applying for teaching positions. Upon a student's entering the clinic, the possibility of his later placement is considered, university courses are chosen, topics for research suggested, and second-semester ap-

prenticeships are planned in relation to possible placement upon graduation.

All students work with children in the Educational Clinic each morning and attend two conference hours on various phases of the work. In addition, they take a formal course in remedial-reading instruction, a seminar in research methods, a course in physical handicaps to learning, and work in mental and educational measurement. Other courses are chosen in relation to individual professional objectives. During the second semester the students are apprenticed to public schools and other child-guidance clinics, where they are given complete responsibility for organizing, planning, and administering the type of work they expect to do the following year. Some do school psychologist's work, some organize a supervisory reading program, some establish remedial classes or laboratories, and others teach on the college level. During the year each student completes a master's thesis of an experimental or test-survey type.

The permanent clinic staff consists of a director, an associate director, and a medical consultant, all having faculty appointments and offering regular university courses. Two to four graduate assistants, at least one of whom has worked in the clinic the previous year, and a secretary constitute the remainder of the staff. Consultants from the faculty of the School of Medicine and from other schools and clinics are invited in when needed.

Children are referred to the clinic by public and private schools, and by parents, physicians, eye specialists, and other clinics and agencies. In every case, the clinic requests that the school from which the child comes first make its own examination of the child. This examination often proves adequate and the child does not enter the clinic. The first two weeks of the fall semester are devoted to the examination of children, in order to select those who seem most promising for regular clinic attendance. Recommendations for remedial instruction and educational adjust-

ment are sent to parents and schools for all children not accepted in the clinic. After the first two weeks, Tuesday and Thursday mornings are set aside for examination of children.

The children who attend the clinic regularly come each morning at nine-thirty and stay until eleven-thirty. (Most of them come at nine and spend a half hour in the science laboratory with the professor of biology who has "adopted" the group, and who should therefore be listed as on the clinic staff.) The first hour is devoted to individual tutoring, with the tutors rotating their work so that they handle different types of reading problems each month. During the second hour there is small-group instruction in other fundamental subjects. Most of the children attend their own schools in the afternoon. The parents who can afford to pay are charged five dollars a week. If a child has an unusually interesting difficulty, and his parents cannot afford to send him in, the clinic often pays his carfare and occasionally buys him suitable clothes. However, the clinic must be self-supporting, as it has no university budget.

The clinic usually starts a school year with ten or twelve children and adds more as interesting cases appear in the Tuesday and Thursday examinations; the total number is desirably limited to fifteen or twenty, although as many as thirty have been admitted. By the opening of the second semester the children are well able to work in groups. Since most of the graduate students are working in the field during the second semester, instruction then is entirely by groups. If the graduate students who remain in the clinic are unable to provide for the needs of the pupils, additional teachers are hired.

Children are sent back to their schools as quickly as possible. It is hoped that every child admitted will be able to adjust to the work of his grade before the end of the year or at least by the following autumn. If a child fails to make his grade by the end of the year, he is invited to

attend the clinic during the summer session. The average gains in reading achievement for the clinic group are shown in the next section of this chapter.

Close relationships are maintained with public and private schools. The courses of study of the surrounding towns are available and are consulted in adjusting the pupil's work in the clinic. Reports of each child's progress are sent to the school as well as to the parent. Teachers from the surrounding towns take courses in the university and visit the clinic when possible. Research studies are carried on in the schools, and administrative and supervisory officers assist in planning research. The members of the clinic staff visit schools constantly and assist teachers in handling instructional problems. They are consulted also in regard to curriculum revision, textbook evaluation, standard and informal test surveys, and other problems connected with reading or adjustments to individual differences. One-day clinics are held in schools where several children are to be examined. A group of students make the examinations and recommendations under the guidance of one of the members of the regular staff. Reading conferences are held occasionally during the school year.

The research completed by graduate students in the Educational Clinic is best shown by presenting a partial list of completed master's theses:

### *Primary Grades*

DONNELLY, H. E. Ed.M., 1932. "Study in Word-Recognition Skills in Grade 1."

WILLIAMS, G. Ed.M., 1935. "Perceptual Difficulties in Reading."

DUFFY, G. B. Ed.M., 1935. "A Diagnostic Study of Reading Difficulties in a Third Grade."

GREENLEAF, E. E. Ed.M., 1936. "Evaluation of Visual-Perception Tests for Predicting Success in First-Grade Reading."



- BEAL, ALICE BURTON. Ed.M., 1937. "An Evaluation of Techniques for Determining the Difficulty of Primary-Grade Reading."
- SMITH, ESTHER. Ed.M., 1938. "Tachistoscopic Studies of Word-Perception Abilities in the Second Grade."
- HENLEY, RUTH. Ed.M., 1938. "Comprehension Difficulties of Various Sentence Structures."

*Middle Grades*

- POTTER, R. Ed.M., 1932. "Comparison of Oral Recall with Written Recall of Silent Reading in the Middle Grades."
- CASSELL, M. A.M., 1933. "Analysis and Interpretation of Lip Movement in Reading in Grades II-VI."
- ACOMB, A. Ed.M., 1936. "Study of the Psychological Factors in Reading and Spelling."
- SULLIVAN, H. B. A.M., 1937. "Construction and Evaluation of a Measure of Auditory Comprehension."
- ELIVIAN, J. Ed.M., 1938. "Word Perception and Word Meaning in Silent Reading in the Intermediate Grades."
- ADAMS, PHYLLIS, and BURNS, BARBARA. Ed.M., 1938. "Individual Differences in Fourth-Grade Reading" and "Diagnostic Study of Reading Difficulties in Fourth Grade."
- CORSON, H. Ed.M., 1938. "Individual Differences in the Extent and Level of the Vocabulary Used by Intermediate-Grade Children."
- ROWLEY, F. Ed.M., 1938. "Motor Coördination in the Field of Handwriting."
- FOSS, G. Ed.M., 1938. "The Effect of Hearing Comprehension on Reading Achievement."
- BRENNAN, M. A.M., 1938. "A Study of Children's Imagery in Visual and Auditory Comprehension."
- KEIR, CLARINDA, G. A.M., 1939. "The Relative Order of Difficulty of Four Types of Skimming in the Intermediate Grades."
- HERBERT, DUDLEY. Ed.M., 1939. "Word Perception in the Upper Grades."



- KENEALLY, KATHERINE G. Ed.M., 1939. "Relative Order of Difficulty of Several Types of Study Skills in the Intermediate Grades."
- WAVLE, ARDRA SOULE. Ed.M., 1939. "A Study of Mental Imagery in Silent Reading."
- BURKE, H. L. Ed.M., 1939. "Study in the Pitch of Oral Reading of Fourth-Grade Children."

*Speech*

- BALLARD, E. I. A.M., 1931. "The Influence of Stammering upon the Achievement of School Children."
- MAINEY, M. C. A.M., 1932. "Preponderance of Male over Female Stammerers."
- McKENNA, M. E. A.M., 1933. "Relation of Handedness to Speech Disorders."

SOME RESULTS OF REMEDIAL-READING  
INSTRUCTION

Remedial-reading instruction should result in more than average gains in reading achievement. It is the hope of the Boston University Educational Clinic that the average gain from a year's attendance will be three years in reading achievement. To make such progress with children whose learning rate has previously been less than half the normal rate, it is necessary to make their learning at least six times as efficient as formerly. However, with individual tutoring daily during the first semester and small-group instruction during the second semester, rapid gains should be expected.

The table on page 330 shows the gains made by pupils in the Educational Clinic during the school year 1938-1939. The mental age and IQ are based on the Stanford-Binet tests, while the reading ages are based on a composite score made up of several reading tests.

# BASIC READING ABILITIES

PUPIL	CA	MA	IQ	READING GRADE OCTOBER, 1938	READING GRADE MAY, 1939	GAIN IN YEARS
J. A.	9-8	9-4	97	2.3	5.1	2.8
R. B.	11-7	10-10	94	0.0	2.9	2.9
J. B.	11-7	12-5	108	6.0	8.0	2.0
P. B.	8-4	10-3	123	3.0	5.9	2.9
R. C.	10-4	10-10	105	3.2	6.3	3.1
E. C.	13-4	13-5	101	3.0	6.8	3.8
L. F.	8-9	12-0	137	1.5	4.5	3.0
M. H.	10-2	9-5	93	3.1	6.1	3.0
J. H.	12-6	11-7	93	3.0	5.1	2.1
F. R.	11-8	10-8	91	2.0	4.1	2.1
W. R.	10-4	12-6	121	3.6	6.3	2.7
N. S.	11-4	12-2	107	2.4	5.9	3.5

A brief description of each child's school status before and after clinic attendance further indicates the results of the work:

	OCTOBER, 1938	OCTOBER, 1939
J. A.	Failing grade three and a marked discipline problem.	Doing well in grade five. No discipline problem.
R. B.	Special class. Non-reader.	Returned to grade five, working in low reading group.
J. B.	Failing grade seven.	Doing well in grade eight.
P. B.	Failing grade four.	Sixth grade at a military academy.
R. C.	Failing grade four.	Superior work in grade five.
E. C.	Special class.	Average work in grade six.
L. F.	Failing grade two.	Good work in grade four.
M. H.	Failing grade five.	Average work in grade six.
J. H.	Failing grade five.	Repeating grade five, average work.
F. R.	Failing grade two, marked discipline problem.	Doing well in grade four.
W. R.	Failing grade four.	Double promotion to grade six. Doing superior work in the grade.
N. S.	Failing grade four.	Returned to grade five and will go to grade six soon.

REFERENCES

Descriptions of remedial programs for individual and class use may be found in the following:

BETTS, E. A. *The Prevention and Correction of Reading Difficulties*, Chapters XIV and XV. Row, Peterson & Co., Evanston, Illinois; 1936.

COLE, LUELLA W. *The Improvement of Reading*, Chapter XVI. Farrar & Rinehart, Inc., New York; 1938.

GATES, A. I. *Improvement of Reading*, Chapters XIII and XIV. The Macmillan Company, New York; 1935.

WITTY, P., and KOPEL, D. *Reading and the Educative Process*, Chapter IV. Ginn & Co., Boston; 1939.

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## CHAPTER 15

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### CASE STUDIES IN REMEDIAL INSTRUCTION

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THE following case studies show some of the types of reading disability which have been found among children attending the Boston University Educational Clinic. All the children described in these case studies had been given medical examinations before coming to the clinic and had no uncorrected physical defects other than those mentioned in the reports. The Stanford-Binet tests were given prior to the remedial-reading program so that the mental ages and intelligence quotients obtained must be considered as minimum estimates. In the light of the later school success of several cases, the obtained IQ's were doubtless ten to twenty points lower than the actual.

It is admitted at the outset that these are some of the more successful pupils. The average success of pupils tutored in the clinic may be seen in the tables in the preceding chapter. In all cases the names have been changed and certain identifying data omitted. The boy in Case Study 1 is the most nearly typical of the average pupil who comes to the clinic, except for his court record. The instructional program has therefore been outlined more fully for this case than for the others.

#### CASE STUDY 1

Boy in Fourth Grade Two Years Retarded in Reading

Anthony Campella

Age: 9 years, 8 months

Grade 4, public school

Binet mental age: 9 years, 4 months; IQ 97

Reading achievement: low second grade

This boy was referred to the Educational Clinic by a social agency which hoped to avoid his commitment to a state institution by having him in the care of the clinic. The agency was convinced that his school failure was behind his court record of truancy and misdemeanors. He had given his teachers a great deal of trouble, climaxed by a fight with three of them in which all received some injuries. The "case history" sent by the agency described many family fights and difficulties, but nothing particularly pertinent to his learning failure.

On the *Durrell Analysis of Reading Difficulty*, Anthony made a low second-grade score on oral-reading tests, but seemed quite unable to keep his attention on silent reading. He did poorly on quick perception of words, and had no method of word analysis. He read a word at a time in a strained voice and a monotone. He was markedly insecure in his reading and repeated words continually. He was unaware of the errors in his reading, indicating a lack of concern about meaning. When his errors were corrected in his oral reading, his comprehension was excellent.

The silent reading was marked by a high rate at the expense of mastery. He skipped all the hard words; as a result his recall was scanty and inaccurate, although he did the best he could with it. Strictly speaking, he did not read silently at all, since his reading was accompanied by constant whispering of the words, vague sounds being given for the difficult words. His eye movements in silent reading were irregular and unrhythmic, with seven to ten per line and many regressive movements.

Anthony attended the Educational Clinic two hours each morning for an entire year. He received one hour's individual tutoring in reading each day and one hour of group work in other fundamental subjects.

The instructional plan in reading consisted of exercises to correct the difficulties discovered in the analysis. The following outline shows the general approach:

- a. Books were chosen for daily work which were mature in content but easy in sight vocabulary.
- b. Each day's oral reading was scanned for difficult words, which were enriched for meaning and taught by quick-recognition methods.
- c. Systematic review of new words taught helped to fix them for permanent use.
- d. Words of first-grade difficulty were presented in the tachistoscope singly and in phrases, so that the boy would recognize them more quickly in his reading.
- e. Various phrase-reading exercises were used, and help was given in breath control and expression.
- f. Anthony was taught to use context cues in word recognition.
- g. Word-analysis exercises through the word-comparison or "intrinsic" phonetics method were used. Some ear training was necessary.
- h. Accurate silent reading was introduced through games and direction assignments. After he had acquired some confidence in silent reading, he was given assignments to complete in his afternoons at school.
- i. He was taught spelling by the visual-motor method. This spelling was utilized in completion-type comprehension exercises.
- j. As his spelling improved, he learned to write summaries of his reading.
- k. As his reading ability reached a fourth-grade level, he was taught to do simple outlining through the steps presented in Chapter 10.
- l. The motivation techniques outlined in Chapter 5 were employed throughout the tutoring.
- m. As his reading approached the fifth-grade level, the fifth-grade textbooks of his school were utilized in the tutoring.
- n. Anthony then began to attend morning sessions of his regular school two days each week, attending the



clinic the other three mornings. Later he transferred to school for all his work.

From the first day at the clinic the boy was coöperative in every way. He was exceptionally attentive and ambitious. His unconscious use of profanity in his conversation provided a little disturbance for a time, but he dropped it quickly when he learned it was not acceptable. After the first semester's work he became the most helpful, courteous, and generally attractive boy attending the clinic. There were no additions to his court record during the year, and there have been none since. His teachers have exercised excellent judgment in using his newly acquired abilities. He received a double promotion, and at present promises to maintain a high record throughout his further school career.

#### CASE STUDY 2

##### Low Perception and Poor Meaning Background

Helen Kennedy

Age: 8 years, 2 months

Grade 3, private school

Binet mental age: 8 years, 8 months; IQ 106

Reading achievement: about thirty sight words

Helen had been in the same school for four years. She started in kindergarten and was promoted each year despite her reading failure, since the school followed the "social promotion" principle. By the end of her third year she had fallen so far behind that she was becoming quite discouraged. She had refused to acknowledge defeat, and insisted on "reading" in third-grade books, moving her lips bravely in the imitation of silent reading. She had long since been exempted from reading orally, because she burst into tears each time she was asked to read. She had been tutored at various periods without success. She had received excellent medical care. Her slight my-

opia had been corrected by glasses, which she avoided wearing whenever she could.

An examination of her reading showed that she had a sight vocabulary of about thirty words. She was unable to analyze any words by herself. She confused words of similar form, and did not use context to aid in word recognition. She knew the names of only a few lower-case letters, and confused *m* and *n*, and *b*, *d*, *p*, and *q*, even in matching. She could write only a few letters and no words. A check of her auditory discrimination of sounds showed that she was unable to identify even the most obvious sounds in words. Her speaking vocabulary was rather small, and her experiences were largely limited to play supervised by governesses. The words *boil*, *bake*, *fry* meant nothing to her. She had never seen a whole cabbage or carrot.

The remedial program consisted of an hour's daily tutoring during school time and additional afternoon experiences to enrich her vocabulary. Since previous attempts at tutoring were unsuccessful, it was highly important for this child to be successful from the beginning. She was told the exact nature of her difficulties and was assured that the lessons would overcome them. Each day's work was centered on a few specific elements which she could master, and provision was made for systematic review. A daily record of progress was kept on various kinds of charts. An hour's work was at first broken into twenty or more short exercises, since Helen had marked difficulty holding her attention on any task for more than a few minutes. The daily lesson at first consisted of two parts: exercises for visual and auditory perception of words, and word recognition and enrichment exercises. She took a great many "field trips" with the tutor in the afternoons. The words in the next few lessons were based on these experiences.

As Helen's sight vocabulary grew, she was given more

time at connected reading and was helped with phrasing and expression. Attention was centered primarily on meaning, with many comments on the story by child and tutor. At the same time, short silent-reading exercises were provided. At first these consisted of oral questions for which answers were found in a single sentence of silent reading, "action cards" in which the child followed the directions which she read silently, and other short exercises. As she gained confidence in silent reading, short stories were used. At the same time the exercises in word analysis and the use of context cues were continued. Her progress was steady throughout the year, and at the end of the year she read third-grade books for pleasure.

The tutoring was dropped at the end of the year. Since that time her progress has been normal. At the present time she is doing average work in the third year of a college of high standing.

### CASE STUDY 3

#### A Complete "Non-Reader" with a Serious Motivation Difficulty

Peter Hanson

Age: 8 years, 6 months

Grade 2, private school

Binet mental age: 8 years, 10 months; IQ 104

Reading achievement: unable to read at all

The headmistress of the school was decidedly distressed about Peter. She had accepted the boy for her school, knowing that he had shown marked educational and emotional difficulties in previous schools. His parents, who had recently moved to town, had bought a house primarily to be near her school. She had assured the mother that the boy would respond well to the educational program and personnel of her school. From the first day in school the boy had refused to coöperate in any way. He had to be carried forcibly to the school; he would listen to no

one and would obey no one. He spent most of his time curled up under tables or behind closet doors. He took little part in any kind of play, except to hit or kick other children. The mother was extremely distressed about the child and had made every effort to obtain expert advice on how to help him; her child had always been hard to manage and she was doing the best she could.

Peter was examined in the private school. He was carried struggling to the examining room and on release quickly hid under a table. He was pulled out, put in a chair, and was told to put some blocks in a box. Fortunately for the examiner, he was frightened enough to obey. Other motor tasks followed immediately, leading into a series of performance tests which he did rather well. By this time the child was answering a few questions, and consequently he was given the Stanford-Binet tests with the mental age result listed above.

From this examination it was apparent that the boy had sufficient mentality for reading but that he would need much eye and ear training before he was ready to read. The most serious difficulty, however, was the motivation problem. The plans for remedial work obviously would require individual tutoring with extremely careful handling. It seemed best not to begin tutoring with the same forceful approach that had characterized the examination. A competent tutor was assigned to the task. It was planned to build some unusually interesting eye and ear training games and to use them with two other boys in the room who would profit by them. This teaching was to be done behind a screen apart from the class but in the corner of the room where Peter usually hid. In addition, the tutor used some of the performance tests which Peter had found interesting. If Peter came out to look, he was to be ignored. On the second day, if he still was interested, he was to be allowed to take part, but only for a short time and in a spirit of tolerance. On the third

day he might be included in the group, but still for a part of the time only. Later he might be told that he could start with the group for that day and if he did well enough he could come sometime again.

The plan worked out very successfully and according to schedule. By the beginning of the second week Peter was a full-fledged member of the group; later in the week he was given extra individual work. With his high mental age, he quickly acquired the visual and auditory background for reading and was able to learn several words. Books were not used until success was assured, since it was known that he would have nothing to do with books at all. However, this gap was bridged successfully and the boy made rapid progress. His mother was cautioned not to mention reading at home until Peter volunteered to read. After about three months of individual tutoring, his mother was asked to visit school to watch him read. This too was a critical point which was successfully carried off. That same night, the boy read to his father. However, the parents were still under the injunction to let him initiate all reading at home.

Before the year was over, Peter was reading well with the average group in the grade. His social adjustment improved markedly with his success in school. The next year he was no different from any other child in his group. He is now in a public junior high school, is making superior marks in all subjects, and is above average in social adjustment.

#### CASE STUDY 4

##### Over-Analysis in Reading by a Boy with Very High Mental Ability

Clark Williams

Age: 11 years, 2 months

Grade 5, public school

Binet mental age: 18 years, 4 months; IQ 166

Reading achievement: low second grade



Clark had been promoted each year on the excellence of his work in all subjects not demanding reading. His background in science, arts and crafts, outdoor sports, music, and general accomplishment was unusual. He was a leader in every activity in which he took part, and was liked by adults and children of all ages. However, reading was beyond him.

His reading was a painful process of individual word analysis. The word *chair* would be met with an attack like this, "ch — ch — ch — ch — air — , chair, chair. What's that? Oh, a chair, of course." By the time he had completed his analysis, the word became an empty sound and he was often unable to relate it to the object. Of course, he had lost all sense of context by that time also. He was very much puzzled about his lack of success, saying, "There must be something to this I'm missing; a good many people dumber than I am can read all right, but I can't seem to catch on." Testing with a tachistoscope revealed that he knew no words on quick flash. Phrasing was nonexistent and silent reading impossible. His speaking vocabulary was unusually rich; he could understand anything he read or heard and could give an excellent oral account.

The remedial training was very short and unusually successful. The relatively few words Clark knew at sight were presented in a tachistoscope as answers to questions. For example, an oral question was asked, "What was the color of the girl's dress?" and the word *blue* was flashed. Word and phrase perception exercises of this type, keeping the meaning high, were followed by sentences containing the words which had been taught in this way. At first his connected reading was confused by the old habits of laborious sounding. He seemed very much surprised that he could read smoothly and get meaning. After about three weeks he said: "I've caught on to this business now. I don't think I need any more tutoring. I can do it myself." During the summer following this tutoring, he



read constantly, and at the beginning of the fall term he was making seventh-grade scores on standardized reading tests. Since that time his record in all school subjects has been a straight "A."

## CASE STUDY 5

## Chronic Inattention in Silent Reading

Frances Woodrow

Age: 13 years, 7 months

Grade 8, private school

Group test IQ's of 88, 93, 90

Binet mental age: 18 years, 6 months; IQ 136

Reading achievement: tests varied  
from grade four to grade six

This girl's mother was distressed because her daughter was not admitted to the college preparatory section of the school she was attending. Her school marks had been poor, and the three group-test IQ's appeared to confirm the opinion of her teachers that she was not college material. However, the surprisingly high Binet mental age obtained in the clinic examination made it evident that Frances had mental ability to do excellent school work. She was immediately given an alternative form of one of the group tests on which her IQ had been so low. She took a great deal of time on each item and finished only a small number of items before time was called. On being asked what took her so long to read the items, she said: "You see, I read each one three times. My father says that I should be thorough, but it doesn't do much good. The first time I read a thing, I don't pay much attention because I know I'm going to read it again. The second time through, the words don't make much more sense, and the third time isn't much use either."

Her reading examinations showed her to have an excellent word-meaning vocabulary. She read orally, without

error and with good phrasing and expression, passages from college textbooks. But her comprehension was very poor; usually she remembered nothing of what she had read. On tachistoscope tests she read quickly quite difficult words in the most rapid flash. Her ability to analyze words was all that could be desired of an intelligent adult. Her silent-reading rate was very slow, due to re-reading. Her comprehension in silent reading was very poor. However, her original compositions were very good.

Since Frances had all the basic reading abilities well established, it was evident that inattention in reading was the root of her difficulty. She could not hold her attention through a single sentence.

The remedial program was carried on through individual tutoring for an hour each day during three months. It consisted of lessons to increase attention in silent reading and to help in oral and written recall of materials read. Oral directions and questions were given before Frances read any sentence. For example, she was told: "This paragraph tells about a military expedition against some Indians. The first sentence tells who was made commander of the expedition and why he was chosen. Who was the commander, and why was he chosen? Read it just once." "The next sentence tells how many men he had and where he got them. How many men did he have and where did he get them?" After a few days of this type of practice, the questions covered several sentences and were of a more general type. Questions for specific details were given after the reading.

Next, the oral questions were changed to written ones, which Frances read silently and then found the answers. The answers were given orally, so that the tutor could see that she was still maintaining her attention. Omissions of detail and inaccuracies in her answers were checked by further oral questions. As she became more competent in reading guided by questions, she was asked to read short

paragraphs without such guidance, the questions now coming after the reading.

When she mastered the art of attentive reading, the lesson plans were directed toward well-organized oral and written recall. Through the steps outlined in Chapter 10, she learned to make idea lines with ease. These were used for making oral and written summaries. This tutoring was done during the summer months. In September, Frances asked to be examined for the college preparatory section of the ninth grade. She made tenth-grade scores on reading tests and IQ's of 140 on the alternative forms of the same group tests she had been given before. She was admitted to the college preparatory class. She maintained an average record throughout preparatory school. She has since graduated from a college of high standing.

#### CASE STUDY 6

##### A "Short Attention Span" Based on Visual Defect

Mary Lyman

Age: 8 years

Grade 3, public school

No mental test given

Reading achievement: test varied  
from grade one to grade three

Mary was brought to the Educational Clinic from a distant town. The school report was that she had a short attention span. She could read well with good comprehension for a short time; then her reading would "go to pieces" and she made careless mistakes on even the easiest words.

The clinic examination showed that her oral and silent reading were at a high third-grade level and that her comprehension was good. However, in order to avoid the "attention span" difficulty, the reading was assigned in short units interspersed with exercises which did not require read-

ing. Her word-recognition ability was average third grade, as was her ability in word analysis. Her spelling and writing were satisfactory.

When the formal tests were over, she was asked to read orally from a book. When she had read for about three minutes she began to make errors on almost every word and finally burst into tears. After a short rest from reading, she began where she had left off and read well without error for a short time. She said, "After I read awhile I can't see the words, they go all blurred."

Mary's mother said that her eyes had been checked by excellent eye specialists and were found to be normal in every way. (Her father was a physician and had been much concerned about eye difficulty.) A stereoscope test with a Wells chart showed her to be markedly exophoric. It was suggested to the mother that an examination be given particularly for muscular imbalance. The eye examination showed an exophoria to such a marked degree that the usual eye-training exercises for this condition were deemed useless by the eye specialist. After an operation to adjust the eye muscles and a short eye-coördination training period, Mary's reading was normal. No remedial reading was necessary. For the past six years she has made normal progress in school.

### REFERENCES

In the following references to case studies of reading disability it is interesting to note that although the method of analysis of the difficulty used by the authors may be quite different, the remedial programs are very similar.

- GATES, A. I. *Improvement of Reading*, Chapter XV. The Macmillan Company, New York; 1935.
- STONE, C. R. *Better Advanced Reading*, Chapter X. Webster Publishing Company, St. Louis; 1937.
- WITTY, P., and KOPEL, D. *Reading and the Educative Process*. Ginn & Co., Boston; 1939.

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## APPENDIX

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### A. REMEDIAL-READING VOCABULARY FOR PRIMARY GRADES

The following list of words was compiled for use in preparing for older children suitable remedial-reading materials with a vocabulary at the primary-grade level. It was derived by first selecting the words of highest frequency in the Faucett-Maki list. These were then checked against the International Kindergarten Union list and the Fitzgerald list in order to make sure that the words finally included are known and used by children. The list contains 90 per cent of the words ordinarily used in the written compositions of children in the intermediate grades, and is therefore also useful as a remedial-spelling list.

#### COMPLETE ALPHABETICAL LIST OF 754 WORDS

The number before each word indicates its frequency; for example, "1" means that the word is among the most frequently used words in the list, while "7" means that it is least frequently used at this level.

1 a	7 ahead	2 an	3 ask
1 about	6 air	1 and	7 asleep
7 able	7 alike	7 angry	1 at
3 above	7 alive	4 animal	4 ate
7 absent	1 all	3 another	2 away
6 across	4 almost	3 answer	7 awful
7 act	3 alone	2 any	
7 add	3 along	7 anybody	4 baby
6 address	5 already	5 anything	2 back
4 afraid	5 also	7 apart	4 bad
3 after	7 although	7 apple	5 bag
6 afternoon	4 always	1 are	4 ball
2 again	3 am	5 arm	7 bank
3 against	7 among	4 around	5 barn
4 ago	7 amount	2 as	4 basket

# APPENDIX

2 be	6 break	7 choose	5 different
3 bear	7 bridge	7 church	6 dig
7 beat	5 bright	4 city	4 dinner
5 beautiful	4 bring	6 class	1 do
4 because	7 broken	4 clean	7 doctor
3 bed	5 brother	6 clear	3 does
3 been	6 brought	7 climb	7 doesn't
3 before	3 brown	3 close	3 dog
6 beg	7 brush	7 cloth	7 dollar
4 began	6 build	7 clothes	4 done
6 begin	7 burn	5 coat	5 don't
5 behind	7 business	4 cold	3 door
4 being	5 busy	7 college	2 down
4 believe	2 but	6 color	5 draw
5 bell	7 button	2 come	5 dress
7 belong	4 buy	5 company	5 drink
3 best	2 by	7 cook	6 drive
2 better		7 cool	6 drop
3 between	2 call	6 copy	7 dry
1 big	2 came	5 cost	7 during
7 bill	1 can	2 could	
3 bird	7 candy	7 count	4 each
4 birthday	6 can't	4 country	5 ear
5 bit	5 cap	5 course	4 early
3 black	3 car	3 cover	6 east
5 blow	6 card	6 cross	3 eat
3 blue	4 care	5 cry	4 egg
5 board	4 carry	7 cup	6 eight
4 boat	6 case	3 cut	4 either
6 body	3 cat		6 else
3 book	3 catch	5 dance	4 end
7 born	7 caught	5 dark	4 enough
3 both	6 cause	2 day	3 even
7 bother	7 cent	6 dead	4 evening
7 bottom	7 certain	7 decide	5 ever
7 bought	3 chair	6 deep	4 every
5 box	4 change	2 did	5 everything
2 boy	5 child	6 didn't	6 except
5 bread	3 children	6 die	7 excuse



# REMEDIAL VOCABULARY

5 expect	6 forget	7 handle	7 hurry
3 eye	7 forgot	7 hang	7 hurt
	3 found	7 happen	
5 face	3 four	4 happy	1 I
4 fair	7 free	3 hard	7 idea
4 fall	3 friend	7 hardly	3 if
6 family	2 from	3 has	5 I'll
3 far	6 front	6 hat	1 in
4 farm	7 fruit	1 have	7 inside
3 fast	5 full	7 haven't	6 instead
7 fat	5 fun	1 he	7 interest
4 father	7 funny	3 head	2 into
7 fed		3 hear	7 iron
5 feed	5 game	3 heard	1 is
3 feel	5 garden	6 heart	1 it
5 feet	3 gave	6 heavy	2 its
5 fell	2 get	5 held	
6 felt	3 girl	2 help	5 jump
4 few	2 give	2 her	2 just
5 field	4 glad	2 here	3 keep
7 fight	7 glass	5 hide	4 kept
5 fill	1 go	4 high	7 kick
3 find	7 gold	5 hill	7 kill
3 fine	5 gone	2 him	5 kind
7 finger	2 good	1 his	5 knew
6 finish	3 got	5 hit	7 knock
4 fire	7 grade	4 hold	3 know
3 first	3 gray	5 hole	
6 fit	4 great	4 home	6 lady
5 five	4 green	3 hope	4 land
6 fix	7 grew	7 horn	5 large
5 floor	5 ground	5 horse	3 last
5 flower	5 grow	5 hot	4 late
5 fly	3 guess	7 hour	3 laugh
7 fold		2 house	4 lay
7 follow	2 had	2 how	6 lead
7 food	3 hair	4 hundred	4 learn
6 foot	3 half	5 hungry	7 least
1 for	3 hand	7 hunt	5 leave

# APPENDIX

5 left	4 mind	6 note	5 picture
6 leg	6 mine	3 nothing	5 piece
2 let	5 minute	2 now	4 place
3 letter	4 miss	5 number	7 plan
7 lie	7 mistake		6 plant
7 life	7 mix	7 o'clock	2 play
7 lift	5 money	1 of	2 please
4 light	4 month	3 off	4 point
2 like	3 more	7 office	5 poor
4 line	3 morning	5 often	7 possible
7 listen	3 most	3 oh	7 pound
1 little	3 mother	2 old	7 pour
3 live	7 mountain	1 on	7 practice
2 long	5 move	3 once	3 present
2 look	3 Mr.	1 one	4 pretty
7 lose	5 Mrs.	4 only	7 price
5 lost	3 much	3 open	6 print
5 lot	6 music	3 or	4 pull
3 love	2 must	7 order	7 push
6 low	1 my	3 other	2 put
	6 myself	6 ought	
2 made		4 our	6 quick
6 mail	3 name	1 out	5 quiet
2 make	3 near	2 over	6 quite
2 man	4 need	4 own	
2 many	3 never		3 rabbit
6 mark	3 new	6 page	5 rain
3 matter	7 news	7 paid	2 ran
2 may	6 next	7 paint	6 rather
1 me	6 nice	4 paper	4 reach
2 mean	3 night	4 part	4 read
7 measure	7 nine	5 party	5 ready
7 meat	2 no	4 pass	6 real
3 meet	7 nobody	6 past	7 really
5 men	5 noise	3 pay	4 reason
7 middle	7 nor	7 pencil	7 receive
3 might	7 north	4 people	3 red
6 mile	7 nose	7 person	4 remember
3 milk	1 not	7 pick	4 rest

## REMEDIAL VOCABULARY

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7 rich	5 shall	6 sound	2 take
5 ride	1 she	6 south	4 talk
4 right	7 shine	5 speak	6 teach
5 ring	6 ship	7 spend	7 teeth
6 river	5 shoe	7 spoil	2 tell
5 road	7 shoot	6 spring	4 ten
7 rock	4 short	7 stamp	4 than
4 roll	7 shot	4 stand	2 thank
4 room	5 should	7 star	1 that
4 round	4 show	4 start	1 the
7 rubber	7 shut	7 state	3 their
7 rule	6 sick	7 station	1 them
2 run	5 side	5 stay	2 then
	6 sign	7 steal	1 there
7 sad	6 silk	6 step	5 these
7 safe	7 since	3 still	1 they
2 said	4 sing	7 stitch	3 thing
7 sail	7 sir	5 stone	3 think
7 sale	5 sister	3 stop	5 third
3 same	5 sit	6 store	2 this
4 sat	4 six	3 story	4 those
6 save	7 size	7 straight	6 though
2 saw	7 skin	7 strange	5 thought
2 say	3 sleep	4 street	6 thousand
3 school	7 slip	5 strong	3 three
6 sea	7 slow	7 struck	7 threw
7 seat	5 small	7 study	7 through
4 second	7 smoke	3 such	7 throw
1 see	5 snow	6 suit	7 tie
3 seem	2 so	4 summer	4 till
5 seen	7 soft	5 sun	2 time
5 sell	6 sold	7 supper	7 tire
3 send	2 some	5 suppose	1 to
4 sent	4 something	3 sure	4 today
4 set	5 sometime	5 surprise	4 together
6 seven	7 son	6 sweet	5 told
4 several	5 song	7 swim	5 tomorrow
7 sew	3 soon		2 too
5 shake	7 sorry	4 table	3 took

## APPENDIX

5 top	7 wagon	2 when	5 wood
6 touch	4 wait	2 where	4 word
4 town	3 walk	6 whether	3 work
7 trade	6 wall	1 which	6 world
4 train	2 want	5 while	2 would
3 tree	6 war	3 white	7 wouldn't
7 trip	5 warm	2 who	7 wrap
7 trouble	1 was	4 whole	3 write
4 true	6 wash	7 whom	7 written
3 try	5 watch	6 whose	6 wrong
4 turn	2 water	2 why	6 wrote
2 two	3 way	6 wide	
	1 we	1 will	5 yard
3 under	6 wear	5 win	3 year
7 understand	6 weather	5 wind	4 yellow
3 until	4 week	5 window	3 yes
1 up	7 weigh	5 winter	6 yesterday
4 upon	2 well	3 wish	4 yet
2 us	1 went	1 with	1 you
3 use	2 were	3 without	3 young
	6 west	5 woman	2 your
3 very	7 wet	6 wonder	6 yourself
6 visit	1 what	7 won't	

## LIST BY FREQUENCY-OF-USE LEVELS

### 1

a	do	in	of	the	we
about	for	is	on	them	went
all	go	it	one	there	what
and	have	little	out	they	which
are	he	me	see	to	will
at	his	my	she	up	with
big	I	not	that	was	you
can					

2

again	come	him	many	said	two
an	could	house	may	saw	us
any	day	how	mean	say	want
as	did	into	must	so	water
away	down	its	no	some	well
back	from	just	now	take	were
be	get	let	old	tell	when
better	give	like	over	thank	where
boy	good	long	play	then	who
but	had	look	please	this	why
by	help	made	put	time	would
call	her	make	ran	toe	your
came	here	man	run		

3

above	car	four	letter	oh	thing
after	cat	friend	live	once	think
against	catch	gave	love	open	three
alone	chair	girl	matter	or	took
along	children	got	meet	other	tree
am	close	gray	might	pay	try
another	cover	guess	milk	present	under
answer	cut	half	more	rabbit	until
ask	does	hand	morning	red	use
bear	dog	hard	most	same	very
bed	door	has	mother	school	walk
been	eat	head	Mr.	seem	way
before	even	hear	much	send	white
best	eye	heard	name	sleep	wish
between	far	hope	near	soon	without
bird	fast	if	never	still	work
black	feel	keep	new	stop	write
blue	find	know	night	such	year
book	fine	last	nothing	sure	yes
both	first	laugh	off	their	young
brown	found				

## 4

afraid	clean	high	point	start
ago	cold	hold	pull	street
almost	country	home	reach	summer
always	dinner	hundred	read	table
animal	done	kept	reason	talk
around	each	land	remember	ten
ate	early	late	rest	than
baby	egg	lay	right	those
bad	either	learn	roll	till
ball	end	light	room	today
basket	enough	line	round	together
because	evening	mind	sat	town
began	every	miss	second	train
being	fair	month	sent	true
believe	fall	need	set	turn
birthday	farm	only	several	upon
boat	father	our	short	wait
bring	few	own	show	week
buy	fire	paper	sing	whole
care	glad	part	six	word
carry	great	pass	something	yellow
change	green	people	stand	yet
city	happy	place		

## 5

already	bread	different	field	held
also	bright	don't	fill	hide
anything	brother	draw	five	hill
arm	busy	dress	floor	hit
bag	cap	drink	flower	hole
barn	child	ear	fly	horse
beautiful	coat	ever	full	hot
behind	company	everything	fun	hungry
bell	cost	expect	game	I'll
bit	course	face	garden	jump
blow	cry	feed	gone	kind
board	dance	feet	ground	knew
box	dark	fell	grow	large



leave	party	shake	stay	tomorrow
left	picture	shall	stone	top
lost	piece	shoe	story	warm
lot	poor	should	strong	watch
men	quiet	side	sun	while
minute	rain	sister	suppose	win
money	ready	sit	surprise	wind
move	ride	small	these	window
Mrs.	ring	snow	third	winter
noise	road	sometime	thought	woman
number	seen	song	through	wood
often	sell	speak	told	yard

6

across	didn't	heavy	quick	teach
address	die	instead	quite	though
afternoon	dig	lady	rather	thousand
air	drive	lead	real	touch
beg	drop	leg	river	visit
begin	east	low	save	wall
body	eight	mail	sea	war
break	else	mark	seven	wash
brought	except	mile	ship	wear
build	family	mine	sick	weather
can't	felt	music	sign	west
card	finish	myself	silk	whether
case	fit	next	sold	whose
cause	fix	nice	sound	wide
class	foot	note	south	wonder
clear	forget	ought	spring	world
color	front	page	step	wrong
copy	hair	past	store	wrote
cross	hat	plant	suit	yesterday
dead	heart	print	sweet	yourself
deep				

able	church	haven't	paint	soft
absent	climb	horn	pencil	son
act	cloth	hour	person	sorry
add	clothes	hunt	pick	spend
ahead	college	hurry	plan	spoil
alike	cook	hurt	possible	stamp
alive	cool	idea	pound	star
although	count	inside	pour	state
among	cup	interest	practice	station
amount	decide	iron	price	steal
angry	doctor	kick	push	stitch
anybody	doesn't	kill	really	straight
apart	dollar	knock	receive	strange
apple	dry	least	rich	struck
asleep	during	lie	rock	study
awful	excuse	life	rubber	supper
bank	fat	lift	rule	swim
beat	fed	listen	sad	teeth
belong	fight	lose	safe	threw
bill	finger	measure	sail	throw
born	fold	meat	sale	tie
bother	follow	middle	seat	tire
bottom	food	mistake	sew	trade
bought	forgot	mix	shine	trip
bridge	free	mountain	shoot	trouble
broken	fruit	news	shot	understand
brush	funny	nine	shut	wagon
burn	glass	nobody	since	weigh
business	gold	nor	sir	wet
button	grade	north	size	whom
candy	grew	nose	skin	won't
caught	handle	o'clock	slip	wouldn't
cent	hang	office	slow	wrap
certain	happen	order	smoke	written
choose	hardly	paid		

## B. DURRELL-SULLIVAN READING VOCABULARIES FOR GRADES FOUR, FIVE, AND SIX<sup>1</sup> DERIVED FROM WORD COUNTS OF BOOKS COMMONLY USED IN EACH GRADE

Some of the most urgent problems among slow learners, especially in the intermediate grades, could be helped by a knowledge of the words most frequently used in books. Thorndike has shown that books recommended for a single grade level reveal a wide range of vocabulary. The number of words to be met by the child in any of the intermediate grades is apparently almost limitless, while his power of learning words is definitely limited to a small fraction of this total. Economy in learning, then, demands that lists be drawn up of words which are most frequently encountered by children in reading in each of the intermediate grades. Such lists would be an aid not only in direct vocabulary instruction, but also in teaching transfer skills such as word-analysis and word-derivation methods. They would also assist in making a better correlation between the reading vocabularies and those of writing, spelling, and composition.

The books selected for the present study were reading series and social-studies books, with a few books in natural science, found to be in wide current use for each of the intermediate grades. Seventeen books were used for grade four, twenty for grade five, and nineteen for grade six. While the basal readers predominate, social-studies books were included because under present curriculum tendencies the social-studies work provides a large part of the reading program. The list of books used for each grade follows:

### *Fourth-Grade Books*

NAME OF BOOK	AUTHOR	PUBLISHER AND DATE OF PUBLICATION
<i>Lincoln Readers</i> (Fourth)	Isobel Davidson Charles Anderson	Laurel Book Company; 1929
<i>Storyland</i> (Book IV)	C. M. Parker M. Free H. T. Treadwell	Row, Peterson & Co.; 1930

<sup>1</sup> Originally published in *The Elementary English Review* for April and May, 1938.

## APPENDIX

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<i>Elson Basic Readers</i> (Book IV)	W. H. Elson W. S. Gray	Scott, Foresman & Co.; 1931
<i>Fourth Reader</i> (Revised Edition)	Emma M. Bolenius	Houghton Mifflin Company; 1929
<i>Work Play</i> (Book IV) <i>Magic Hours</i>	A. I. Gates J. Y. Ayer	The Macmillan Company; 1933
<i>The Great Idea and Other Stories</i>	B. R. Buckingham	Ginn & Co.; 1934
<i>Trails of Adventure</i> (Book IV)	M. Browning H. Follis U. W. Leavell E. G. Breckenridge	American Book Company; 1936
<i>Book Friends</i>	R. L. Hardy E. Turpin	Newson & Co.; 1929
<i>Atlantic Readers</i> (Book I) <i>The Understanding Prince</i>	Randall J. Condon	Little, Brown & Co.; 1928
<i>Pathway to Reading</i> (Fourth)	B. B. Coleman W. Uhl J. F. Hosc	Silver, Burdett & Co.; 1926
<i>Adventures in Reading</i> (Fourth)	E. E. Smith O. Lowe L. S. Simpson	Doubleday, Doran & Co., Inc.; 1928
<i>Nature and Science Readers</i> (Book IV)	E. M. Patch H. E. Howe	The Macmillan Company; 1934
<i>Thought Study Readers</i> (Book IV)	P. R. Spencer R. Gans H. W. Horst	Lyons & Carnahan; 1929
<i>Everyday Classics</i> (Fourth Reader)	F. T. Baker A. H. Thorndike	The Macmillan Company; 1928
<i>Ourselves and Our City</i>	F. G. Carpenter	American Book Company; 1928
<i>Around the World with the Children</i>	F. G. Carpenter	American Book Company; 1927
<i>The Earth and Living Things: Pathways in Science</i>	G. S. Craig B. D. Hurley	Ginn & Co.; 1932
<i>The First Three Hundred Years in America</i>	N. G. Clark W. F. Gordy	Charles Scribner's Sons; 1931
<i>Home Folks</i>	J. Russell Smith	John C. Winston Company; 1934

# INTERMEDIATE VOCABULARY

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## Fifth-Grade Books

NAME OF BOOK	AUTHOR	PUBLISHER AND DATE OF PUBLICATION
<i>Fifth Reader</i> (Revised Edition)	Emma M. Bolenius	Houghton Mifflin Company; 1929
<i>Lincoln Readers</i> (Fifth)	Isobel Davidson Charles Anderson	Laurel Book Company; 1929
<i>Elson Basic Readers</i> (Book V)	W. H. Elson W. S. Gray	Scott, Foresman & Co.; 1931
<i>Reading and Living</i> (Book I)	H. C. Hill R. L. Lyman N. E. Moore	Charles Scribner's Sons; 1930
<i>Builders of Our Country</i>	G. Southworth	D. Appleton-Century Company, Inc.; 1922
<i>Too Many Bears and Other Stories</i>	B. R. Buckingham	Ginn & Co.; 1936
<i>Working Together</i>	A. W. Edson M. E. Laing	Benjamin H. Sanborn & Co.; 1935
<i>Helpful Living</i>	C. L. Brownell A. C. Ireland H. F. Giles	Rand McNally & Co.; 1935
<i>Work Play</i> (Book V): <i>Pleasant Lands</i>	A. I. Gates J. Y. Ayer	The Macmillan Company; 1932
<i>The World's Gifts</i> (Book V)	U. W. Leavell E. G. Breckenridge M. Browning H. Follis	American Book Company; 1936
<i>Book Adventures</i>	R. L. Hardy E. Turpin	Newson & Co.; 1929
<i>Atlantic Readers</i> (Book II): <i>High and Far</i>	Randall J. Condon	Little, Brown & Co.; 1928
<i>Pathway to Reading</i> (Fifth)	B. B. Coleman W. Uhl J. F. Hosc	Silver, Burdett & Co.; 1926
<i>Adventures in Reading</i> (Fifth)	E. E. Smith O. Lowe L. S. Simpson	Doubleday, Doran & Co., Inc.; 1928
<i>Storyland</i> (Book V)	L. W. Rader M. Free H. T. Treadwell	Row, Peterson & Co.; 1930
<i>Nature and Science Readers</i> (Book V)	E. M. Patch H. E. Howe	The Macmillan Company; 1934

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<i>Thought Study Readers</i> (Book V)	P. R. Spencer R. Gans L. D. Fritschler	Lyons & Carnahan; 1929
<i>The New Path to Reading</i> (Book V)	A. D. Cordts	Ginn & Co.; 1932
<i>Learning about Our World: Pathways in Sci- ence</i>	G. S. Craig M. O. Condry	Ginn & Co.; 1932
<i>The Birth and Growth of Our Nation</i>	N. G. Clark W. F. Gordy	Charles Scribner's Sons; 1933

### *Sixth-Grade Books*

NAME OF BOOK	AUTHOR	PUBLISHER AND DATE OF PUBLICATION
<i>Lincoln Readers</i> (Sixth)	Isobel Davidson Charles Anderson	Laurel Book Company; 1928
<i>Reading to Learn</i> (Book I)	G. A. Yoakam W. C. Bagley P. A. Knowlton	The Macmillan Com- pany; 1935
<i>The Masquerade and Other Stories</i>	B. R. Buckingham	Ginn & Co.; 1934
<i>Golden Leaves</i>	A. I. Gates J. Y. Ayer	The Macmillan Com- pany; 1932
<i>Winning Our Way</i> (Book VI)	U. W. Leavell E. G. Breckenridge M. Browning H. Follis	American Book Com- pany; 1936
<i>Reading and Living</i> (Middle Grades)	H. C. Hill R. L. Lyman N. E. Moore	Charles Scribner's Sons; 1930
<i>Book World</i>	R. L. Hardy E. Turpin	Newson & Co.; 1929
<i>Atlantic Readers</i> (Book III): <i>The Wonderful Tune</i>	Randall J. Condon	Little, Brown & Co.; 1928
<i>Pathway to Reading</i> (Sixth)	B. B. Coleman W. Uhl J. F. Hosic E. Howard	Silver, Burdett & Co.; 1926
<i>Elson Basic Readers</i> (Book VI)	W. H. Elson W. S. Gray	Scott, Foresman & Co.; 1931
<i>Adventures in Reading</i> (Sixth)	E. E. Smith O. Lowe L. S. Simpson	Doubleday, Doran & Co., Inc.; 1928



## INTERMEDIATE VOCABULARY

<i>Nature and Science Readers</i> (Book VI)	E. M. Patch H. E. Howe	The Macmillan Company; 1934
<i>Thought Study Readers</i> (Book VI)	P. R. Spencer R. Gans L. D. Fritschler	Lyons & Carnahan; 1930
<i>Everyday Classics</i> (Book VI)	F. T. Baker A. H. Thorndike	The Macmillan Company; 1928
<i>How the World Is Clothed</i>	F. G. Carpenter	American Book Company; 1929
<i>Builders of Our Country</i> (Book II)	G. Southworth	D. Appleton-Century Company, Inc.; 1922
<i>Our Earth and Its Story: Pathways in Science</i>	G. S. Craig G. N. Johnson	Ginn & Co.; 1932
<i>Children's Own Readers</i> (Book VI)	M. E. Pennell A. M. Cusack	Ginn & Co.; 1929

In counting the words, only those words were recorded which do not appear in the Gates Primary List. Words are included in the final list which appeared in seven or more books at each grade level. Words appearing in the lower-grade lists are, of course, not repeated in the later lists. It seemed more desirable to use a basis of one or more appearance in each of seven books than to use a total frequency count, since a single book might use a word so frequently that it would be weighted incorrectly in the final list. The size of a word list is, of course, determined by the criterion which is used for including the word in the list. For the purposes of the author it was desirable to have lists of from 500 to 700 words at each of the grade levels. The criterion of use in at least seven of the books for the grade level was the one which produced the most satisfactory word groups. This basis for selection of words yielded 691 words in the fourth-grade list, 525 words in the fifth-grade list, and 849 words in the sixth-grade list. While it would be desirable to have an increase in the number of words for each grade, rather than the marked dropping off in the number for the fifth grade, it seemed best for various reasons not to change the basis of word selection for an individual grade.

# APPENDIX

## SELECTED VOCABULARY FOR GRADE FOUR

a	T <sup>1</sup>	B-D <sup>1</sup>	avoid	2b	4
abide	4a	6	awe	4a	5
ablaze	17	—	awl	17	6
abode	4a	7			
absent	3a	KU	b	T	B-D
abuse	3b	6	bacon	4a	KU
acre	2b	5	badge	6	KU
action	2a	3	balcony	10	4
actor	5a	3	balk	9	5
addition	2b	2	banister	18	5
adopt	3a	—	banquet	3b	5
adore	4a	6	bargain	3a	4
adventure	3b	5	barren	3b	5
advertise	5a	6	baste	10	3
agent	4b	4	beacon	10	2
agree	2a	4	behave	4a	3
airship	17	2	bellows	17	3
alien	7	6	bewilder	7	7
almond	7	5	blade	2b	2
alter	3b	5	blast	3a	2
alternate	6	6	bleach	6	6
anger	2	4	blessed	1b	KU
annoy	5b	3	blinds	—	KU
antelope	13	6	blinker	—	2
appetite	3b	4	blister	6	7
appoint	2a	5	blizzard	11	4
arch	2b	6	blood	1b	KU
arctic	5b	—	bluff	5a	4
army	1b	2	blunt	4b	—
arrest	4a	KU	bolt	3a	5
artist	3b	3	bomb	9	5
attire	4b	7	boost	13	7
attract	4a	6	bore	2b	3

<sup>1</sup>The column headed "T" shows the rating of the word in the Thorndike list; the column headed "B-D" shows the grade placement in the Buckingham-Dolch list. See also pages 388-391 for a discussion of these ratings.

# INTERMEDIATE VOCABULARY

boss	6	KU	chef	18	KU
bound	2a	2	chest	2b	KU
brace	4b	2	chew	6	KU
bracket	9	6	chief	1b	KU
bravery	5a	8	chilly	8	4
bray	9	3	choir	4b	5
breathe	2a	6	chorus	7	4
bribe	5b	—	chuckle	6	8
brief	2b	4	click	10	2
brilliant	4a	4	cling	5a	2
brisk	5a	—	clutch	5a	5
broad	1b	3	coach	2b	3
bustle	7	7	coax	8	5
bureau	3b	KU	combine	3a	6
			comical	10	6
<b>c</b>	<b>T</b>	<b>B-D</b>	commence	3b	5
cab	6	KU	compound	5b	2
cabinet	4b	KU	conceal	3a	6
cactus	10	8	concert	4a	5
calk	16	—	congress	2b	4
calm	2b	5	consume	4a	7
cancel	8	5	content	2a	4
canoe	4b	KU	continue	1b	4
canopy	9	6	contrary	3a	3
capable	3b	5	control	2b	3
carcass	8	—	coral	5b	5
cargo	4b	3	couch	3a	KU
carver	13	—	council	2b	4
cash	3b	2	coupon	11	5
cashier	6	5	courage	2b	4
cast	2a	2	cove	9	5
central	2b	3	cramp	8	3
cereal	8	2	crank	8	KU
challenge	6	5	crate	7	3
chamber	2a	4	credit	3a	4
chapel	3a	6	creep	2b	2
charge	1b	3	crest	4a	5
charter	4b	5	crew	2a	5
cheat	4a	2	crude	6	7

# APPENDIX

crust	4a	3	drain	2b	5
curate	11	—	drift	4a	3
custard	9	5	drill	2b	KU
			drip	4a	2
d	<i>T</i>	<i>B-D</i>	drug	3b	2
dagger	6	5	dull	3a	2
daily	2b	2	dumb	3a	2
dainty	4b	3	dump	8	KU
damage	3b	4	dusk	6	3
damp	3b	2	dwelt	2b	3
darn	6	KU	dye	4a	3
dazzle	5a	7			
deal	1b	3	e	<i>T</i>	<i>B-D</i>
decide	1b	3	ebony	8	7
declare	2a	4	education	3a	3
deface	9	7	elastic	5b	5
defeat	3b	5	elect	2a	4
defend	2a	5	electric	3a	KU
delight	1b	2	elegant	4b	5
dent	13	2	elevate	4b	4
depart	2a	5	else	1b	KU
deposit	3b	4	embark	7	8
desire	1b	4	emblem	9	4
dessert	7	6	embrace	3a	5
difficult	2a	5	engineer	4a	KU
dike	12	2	enter	1b	3
dilute	11	8	envy	3a	6
direct	1b	3	erect	2b	4
discuss	4a	6	escape	1b	3
disease	2b	4	event	2a	4
dismal	4b	4	evergreen	7	4
dismiss	3b	4	evil	2a	4
dispatch	7	6	exact	2a	4
distance	1b	4	examine	2b	4
distress	3a	4	example	2a	3
district	2b	3	exchange	2b	2
ditch	3a	KU	expel	5b	7
dose	7	2	eyesight	9	5

# INTERMEDIATE VOCABULARY

f	T	B-D	furnace	3b	KU
fable	4a	2	furnish	2a	3
fade(less)	2b	2	furniture	2b	KU
failure	5a	5			
faith	2a	3	g	T	B-D
false	2b	KU	gale	4a	2
falsehood	4b	4	gallery	4a	6
famous	1b	3	gallon	5b	2
faucet	10	KU	gaseous	8	6
female	3a	4	gem	2b	2
fencing	—	—	generous	3a	5
fender	12	4	germ	6	KU
ferocious	11	7	ghost	2b	3
ferry	5a	KU	glance	2b	3
fever	2b	3	gleam	4a	5
fiber	19	6	glide	3b	2
fidget	14	—	glimpse	5a	8
fiery	3b	6	globe	3a	3
file	3a	2	gloomy	5a	4
film	5b	5	glory	2a	3
filthy	6	5	glossy	8	5
flash	2a	2	glue	5b	KU
flask	9	4	glutton	12	8
flesh	2a	4	gnash	10	—
foliage	6	6	governor	2a	4
folk	2a	2	gown	2b	KU
fondle	16	8	grab	8	KU
foreign	2a	3	grade	2b	KU
forenoon	4a	3	grammar	5a	3
forge	4b	5	granite	5b	4
form	1a	2	grant	1b	3
fort	2b	3	grasp	4a	7
fountain	2b	KU	gravel	5b	4
frame	2a	2	grease	5b	2
fraud	5b	8	grief	2b	4
frightful	6	5	groove	6	7
frigid	9	4	group	2b	3
froth	11	—	guest	2a	3
frown	3b	2	gypsy	8	3
fudge	—	5			

# APPENDIX

h	T	B-D	i	T	B-D
habit	3a	2	iceberg	9	2
halibut	14	6	ideal	4a	4
halt	4a	2	idiot	5a	6
halter	7	7	idle	2b	4
harbor	2b	4	illness	5b	5
hardy	4a	—	immense	3b	5
harp	4a	2	imp	11	5
harvest	2a	5	import	3b	5
haste	2a	2	improve	2b	4
hatchet	5a	KU	impure	11	8
haughty	4a	7	infant	3b	5
haven	5b	8	inhabit	4a	6
heap	2b	2	injure	3a	4
height	1b	2	inland	5a	—
hem	4a	KU	inquire	3a	5
herd	2b	2	insect	3a	4
hint	4b	3	instant	2b	5
hitch	8	KU	intend	2a	3
hither	3a	7	introduce	3a	2
hobby	7	8	itch	6	2
hobo	—	6	ivory	3b	4
holiday	2b	2	ivy	5a	6
holy	2a	3			
homesick	7	5	j	T	B-D
homespun	10	8	jail	5b	KU
homestead	7	8	jaw	3a	KU
honest	2a	3	jealous	3b	3
honor	1b	2	jelly	4a	KU
hoof	3a	2	jest	4b	3
hook	2b	KU	jet	5a	3
horrible	3b	6	jewel	3a	3
hostile	5b	8	jingle	8	4
hovel	5a	5	jitney	—	—
human	2a	4	job	3a	KU
hustle	7	6	jog	10	—
hysterics	11	8	jolly	4a	2
			judge	1b	3
			juice	4a	KU



# INTERMEDIATE VOCABULARY

junior	5a	2	links	3b	—
jut	6	—	liquid	3b	5
			litter	5b	2
k	<i>T</i>	<i>B-D</i>	loan	7	3
keen	3b	2	loosen	6	—
kennel	8	6	lounge	9	6
kerosene	6	5	lucky	4a	3
keyboard	15	—			
kidnap	12	4	m	<i>T</i>	<i>B-D</i>
kiln	13	—	machine	2a	KU
kimono	12	6	mackerel	11	4
kindle	4a	4	magic	3a	2
kindling	—	7	magnet	7	6
kink	19	—	magnify	5a	6
knight	2a	KU	manage	2b	4
			manger	6	KU
l	<i>T</i>	<i>B-D</i>	maniac	15	7
labor	1b	3	manner	1b	2
lacy	—	—	margin	5a	3
laden	4a	3	marine	6	6
lame	3a	2	mattress	7	KU
language	2a	2	mayor	3a	4
lapse	7	—	medicine	2b	KU
larceny	16	8	meek	4a	2
latch	5a	2	megaphone	20	7
launch	5a	5	mellow	5a	3
laurel	4b	7	melon	6	3
lawyer	3b	3	memory	2a	4
leak	6	2	menu	13	5
lecture	4b	5	mercy	2b	4
leisure	5a	6	merit	3a	4
lemon	4a	KU	mesh	8	—
lens	10	3	metal	2b	4
leopard	8	4	midget	20	5
level	2a	4	migrate	7	—
library	2b	KU	mild	2b	2
lice	11	2	military	3a	5
limb	2b	3	millinery	10	5
linger	4a	3	mince	6	4

# APPENDIX

mineral	4b	5	owner	2a	3
mingle	3b	6	oyster	4a	4
minstrel	6	6			
moan	4a	5	p	T	B-D
model	2b	5	painful	5a	—
modern	2b	3	parcel	3a	4
moist	4a	3	parent	2a	—
moment	1b	2	partner	3b	KU
monitor	12	3	paste	5b	KU
motion	2b	4	peace	1b	2
motor	4a	KU	peak	4b	3
motorist	14	6	pearl	2b	2
mount	1b	5	pebble	5a	3
muscle	6	2	pedal	11	6
muslin	6	5	peddle	19	4
			peddler	17	—
n	T	B-D	peel	5a	KU
nasty	10	3	pelt	8	8
nation	1b	3	perch	3b	2
national	2b	2	perfect	1b	2
native	2a	4	perfume	4a	KU
natural	1b	4	period	2b	3
nature	1b	4	permanent	4a	5
naval	7	5	permit	2a	5
nervous	4b	4	pester	15	—
nestle	6	6	petal	6	5
noble	2a	3	pilot	6	4
nonsense	5a	3	pitch	3a	3
notion	3b	3	plaster	5b	3
			plateau	5a	4
o	T	B-D	pledge	3b	3
object	1b	4	plump	5a	2
observe	2a	4	plural	10	5
obtain	2a	5	poet	2a	5
odd	2b	2	poetry	4a	5
omit	4b	6	poke	8	KU
orchard	2b	3	polish	3b	KU
overalls	9	KU	possible	1b	2
owe	2a	2	powder	3a	KU

# INTERMEDIATE VOCABULARY

* prairie	5b	4	rigid	7	—
principal	2b	5	rinse	11	7
puppet	13	—	risk	4a	3
purchase	2a	5	rob	2b	2
			royal	2a	3
q	T	B-D	ruby	5b	5
quarter	1b	KU	rude	2b	2
quill	9	5	ruin	2a	5
quilt	5a	KU	rummage	12	—
quotient	9	2	rust	3b	2
			rut	13	2
r	T	B-D	s	T	B-D
racket	12	4	saint	2b	2
rage	3a	2	salad	5b	KU
railroad	2a	KU	saliva	8	—
ramble	8	—	salmon	6	3
range	2a	4	sandal	7	KU
rank	2a	2	sank	4a	2
ransom	5b	5	satisfy	2a	4
rapid	1b	5	sauce	4a	KU
rare	2b	3	scale	2a	2
rave	5a	3	scarce	2a	5
razor	6	5	scare	3a	KU
recent	3a	5	scarf	4a	KU
recess	3b	KU	scatter	2a	3
record	2a	KU	scrape	3b	KU
recover	2b	3	scratch	3a	KU
read	3b	2	screw	5a	2
refuse	2a	4	scrub	5a	4
relation	3a	4	seal	2b	2
remnant	4b	7	seldom	2b	4
remove	2a	4	senior	6	4
rent	2a	2	sense	2a	3
repair	2a	3	sensible	4b	5
repeat	2a	4	separate	1b	3
report	1b	2	serene	5a	3
rescue	3b	7	serious	2b	4
rib	3a	2	service	1b	2
rifle	5b	3			

# APPENDIX

settle	1b	2
settler	4a	5
shallow	3b	5
shame	2a	2
shanty	18	5
shark	9	2
shave	4b	3
shelve	4b	4
shield	3a	4
shovel	4b	KU
sink	2a	KU
situate	3b	5
slice	4b	KU
snore	6	2
snout	7	5
social	3b	6
spatter	10	—
special	2a	4
sphere	3b	4
sprawl	10	6
stagger	4a	8
stake	3b	2
stale	4b	3
stall	3b	2
startle	4b	8
stiffen	8	—
stingy	18	5
streak	6	7
stuff	2b	KU
sulky	11	8

<b>t</b>	<b>T</b>	<b>B-D</b>
tab	13	2
tack	6	2
talkative	15	7
tank	4b	KU
tape	6	2
tart	6	2
tax	2a	2

taxicab	14	7
teeming	7	—
telegraph	4a	3
temper	3a	4
tenant	5a	5
tender	2a	2
terrify	6	4
test	2b	2
thicken	7	—
thief	3a	3
thimble	6	KU
thistle	4b	—
thrash	5a	—
threat	5a	8
thrill	4a	2
tickle	5a	4
tide	2b	2
tile	4a	2
trace	2a	KU
trail	3b	2
trash	11	2
tread	2b	2
trench	5a	4
trespass	6	6
triangle	6	KU
trickle	8	—
trinket	10	5
trumpeter	12	4
turpentine	7	KU
twine	4a	3
twist	3b	3
typewriter	5b	4

<b>u</b>	<b>T</b>	<b>B-D</b>
uncertain	4b	8
understand	1b	3
uneasy	5a	7
unequal	6	8
unfit	5a	4

# INTERMEDIATE VOCABULARY

unfold	5a	8	wail	4a	2
union	2a	2	waist	2b	KU
unite	1b	3	waive	14	—
unknit	—	—	waltz	15	3
unless	2a	KU	wander	2a	2
unloosen	14	—	warn	2b	2
uplands	8	—	waste	1b	KU
upset	5a	2	wealthy	3b	3
usual	1b	4	weaver	6	—
			weight	1b	2
v	T	B-D	wept	3b	2
vacation	3b	KU	wicked	2b	3
vain	2a	2	wisdom	2a	3
value	1b	2	witty	5b	8
vapor	3a	6	wondrous	4a	7
variety	3a	2	wreath	3a	3
veil	3b	3	wreck	3a	KU
vein	3a	3	wreckage	19	8
vex	3a	6	wrench	5a	4
view	1b	4	wriggle	11	—
vigil	7	—			
villain	5a	4	y	T	B-D
vote	2b	3	yelp	8	—
vowel	7	2	yowl	—	—
voyage	3a	3			
vulgar	5b	5			
			z	T	B-D
w	T	B-D	zeal	3b	7
wage	2b	5	zone	3a	3

## SELECTED VOCABULARY FOR GRADE FIVE

a	T	B-D	actually	6	—
accident	3a	2	advise	2b	6
accomplish	2a	5	affair	2b	5
accord	4a	6	affectionate	5b	5
accuse	3b	7	airtight	18	—
acquit	9	—	alternate	6	6
active	3a	5	amazingly	—	—

# APPENDIX

ancestor	4a	6	bulb	5b	KU
anxious	2b	6	bumper	10	7
apology	7	7	bury	2a	4
approach	2a	4	butternut	—	6
armor	3a	3			
arrival	3a	6			
astir	14	—	c	T	B-D
astonishment	5b	—	canal	3a	5
astride	13	—	canvas	3b	6
audience	4a	6	career	4b	6
aviator	15	3	carnation	11	KU
			cathedral	4b	6
			caustic	14	—
b	T	B-D	cavalier	6	7
bade	3a	3	central	2b	3
baggage	7	KU	chamois	14	8
bargain	3a	4	char	13	—
barrel	3a	KU	charcoal	8	5
barrier	5b	7	charm	2a	3
bawl	8	KU	christen	10	6
bayberry	20	—	cipher	—	—
bazaar	15	5	clad	4a	2
beacon	10	2	claim	2a	2
bemoan	9	—	cleft	6	—
billow	5a	7	cliff	3a	2
bin	8	2	clump	9	3
bind	2a	2	cluster	3b	7
bishop	4b	5	cockpit	—	8
blacksmith	3a	KU	collie	17	3
blast	3a	2	combine	3a	6
blest	5a	2	comforter	5b	—
blunt	4b	—	commander	4b	4
bluster	10	—	committee	3b	4
boast	2b	4	commotion	7	7
bodice	14	—	companion	2a	4
bolt	3a	5	compare	2a	4
boom	8	KU	compass	2b	4
borrow	3a	3	complain	2b	5
brew	6	5	comrade	4a	5
brood	4a	3	confess	3a	5



# INTERMEDIATE VOCABULARY

conquer	2b	5	discourage	4a	5
conscience	3a	5	disguise	3b	5
contain	1b	4	disgust	5b	6
container	12	—	dispute	3a	5
contemptuous	7	—	distress	3a	4
control	2b	4	district	3b	3
conversation	3a	4	disturb	3a	5
costume	5b	4	doily	12	KU
courtier	4b	—	dome	4b	2
crag	6	3	doubtless	4a	5
crisis	8	—	dragon	3b	3
croak	5a	KU	drawbridge	13	8
crunch	20	3	dreary	5b	5
cuckoo	4b	KU	drubbing	—	—
cultivate	5a	5	duffer	—	—
cunning	3a	2	e	T	B-D
curiosity	5a	5	earthenware	9	—
custom	2a	4	elbow	3b	2
cylinder	5b	7	elder	3b	—
d	T	B-D	embrace	3a	5
dart	3a	2	embroider	5b	5
dash	2a	2	emerge	6	7
debate	3b	4	encouragement	8	7
decay	3a	2	endure	3a	5
deceive	2b	5	energetic	8	7
decorate	6	KU	enormous	3a	5
definite	6	6	entry	4a	6
delicate	3a	5	ere	2a	3
delicious	4a	3	erect	2b	4
depth	3a	4	ermine	13	6
descendant	7	8	eruption	9	6
deserve	2b	3	essential	5b	5
despair	3a	7	estimate	4a	5
detach	9	7	event	2a	4
dike	12	2	exclaim	3a	4
dipper	6	2	expensive	4a	5
disagreeable	6	4	explore	4b	4
disappearance	11	8	extra	4a	2
			extraordinary	4b	6

# APPENDIX

f	T	B-D
fame	2b	2
fertile	4a	6
fertilizer	6	5
festival	4b	6
finally	2a	—
firm	1b	3
flannel	6	5
fleece	4b	5
flint	5b	2
fluid	4b	8
footman	6	7
forehead	2b	4
forge	4b	5
fortunate	3b	5
fortune	2a	3
fragment	5b	7
friction	7	6
frisk	9	—
frock	5a	3
fuel	3b	3
furious	3b	4
furrow	5a	3
future	2a	3

g	T	B-D
gait	5b	4
gasp	6	—
gather	1b	2
gauge	2b	5
gaze	9	7
gentian	14	—
geometry	9	6
geranium	8	KU
gild	4a	—
glare	4a	3
glint	11	—
glitter	3a	6
goblin	9	5

gourd	10	—
grackle	—	—
grasp	4a	7
grateful	3a	4
gravity	7	7
graze	3b	4
gridiron	—	8
grieve	3a	5
groove	6	7
grove	2b	3
gruel	10	8
gurgle	13	7

h	T	B-D
hangar	10	—
hastily	5a	6
hasty	4b	—
haul	5a	KU
haycock	11	3
heap	2b	2
heartly	4a	3
heave	3b	—
hedgerow	11	—
helmet	4b	6
herb	4a	—
highway	4a	5
hither	3a	7
horizontal	7	7

i	T	B-D
ignition	13	7
imagination	3b	4
immediate	2a	4
immense	3b	5
immortal	3a	6
impatient	5a	6
impress	5a	6
imprison	5a	6
improve	2b	4

# INTERMEDIATE VOCABULARY

inhabit	4a	6	lo	4b	—
inherit	4a	6	lodge	6	—
injure	3a	4	loft	8	3
instant	2b	5	lofty	3b	6
instantly	8	—	lye	15	2
intelligent	5b	5			
invention	3b	4	m	T	B-D
investigate	6	4	majesty	3b	5
irregular	4b	4	mansion	4a	5
irritable	9	—	mart	9	—
irritate	7	7	marvelous	3b	3
isle	3a	5	meek	4a	2
			mellow	5a	3
j	T	B-D	midst	3a	3
jagged	17	—	mighty	2a	2
jaundice	13	—	minstrel	6	6
jaunt	18	—	miraculous	8	8
jiffy	16	—	mischievous	7	5
joint	3a	3	mistress	2b	3
jostle	7	6	miter	6	—
judgment	2b	3	moat	8	3
			model	2b	5
k	T	B-D	moist	4a	3
keen	3b	2	molasses	8	4
knead	8	6	monoplane	—	7
knell	4a	3	monster	4b	3
knickers	—	—	morsel	6	6
			motionless	7	7
l	T	B-D	motor	4a	KU
lance	4a	3	mournful	5b	5
lash	5a	3	mourning	5b	—
lever	9	KU	mucilage	17	6
liberty	2a	2	murder	3a	3
lilac	10	KU	murmur	3a	2
lime	4a	2	muskrat	12	5
linden	7	6	muster	6	7
linger	4a	3	mystery	3a	6
link	3b	2			
liquid	3b	5			

## APPENDIX

n	<i>T</i>	<i>B-D</i>	pelt	8	8
nasturtium	13	KU	perspiration	11	6
native	2a	4	persuade	3b	7
necessary	1b	4	pester	12	8
necessity	3a	6	physical	5b	5
nectar	13	8	pioneer	5b	3
nimble	5b	3	pirate	6	3
noble	2a	3	piston	11	7
nonsense	5a	3	piteous	12	—
noose	11	3	pivot	8	—
nosegay	14	—	plead	3b	5
notch	8	6	plentiful	5a	6
nursery	6	5	plunge	3a	3
			population	3a	4
o	<i>T</i>	<i>B-D</i>	porcupine	9	3
oath	7	6	porridge	10	KU
obedient	5a	3	porter	4b	5
obscure	5a	7	potash	12	—
obtainable	10	5	pottery	11	2
occupy	2a	4	practice	1b	3
offer	1b	4	precious	2b	4
officer	1b	3	preen	19	—
opportunity	2b	5	presently	7	6
orchard	2b	3	prim	12	8
ordeal	12	—	prime	4a	4
ordinary	3a	6	procession	4b	3
			progress	3a	4
p	<i>T</i>	<i>B-D</i>	prolong	4a	6
paddle	6	KU	protest	4b	4
pant	3a	2	provide	2a	3
panther	10	5	provoke	3b	6
paraffin	10	8	public	1b	2
particular	2a	4	purpose	1a	4
partridge	6	—			
patent	5a	3	r	<i>T</i>	<i>B-D</i>
patience	3a	5	raccoon	17	2
pause	3b	5	radiant	5a	5
peak	4b	3	radical	7	8
peal	4b	2	rage	3a	2

# INTERMEDIATE VOCABULARY

rally	—	—	shudder	6	5
raven	3b	5	simpleton	15	—
ravine	11	5	slack	6	3
realize	3b	4	slight	2a	3
rebel	3b	6	smite	4b	8
reflect	4a	7	snare	4b	5
refrain	5a	4	snip	10	3
reliable	6	3	snort	7	8
relish	6	—	snuggle	—	—
remarkable	3b	5	sociable	13	7
repeat	2a	4	solemn	3b	5
reverence	4a	5	solution	5b	6
reverse	4b	6	solve	3b	5
rheumatism	7	5	soot	9	2
ridiculous	6	5	spiral	9	8
ripple	5a	2	split	3b	2
roam	3b	2	stadium	16	4
rogue	5a	3	stain	3a	2
romance	6	7	stall	3b	2
roost	11	2	statute	6	8
rosin	12	7	stock	1b	2
royal	2a	3	streak	6	7
rude	2b	2	stride	4b	3
rustle	4b	6	stubborn	4a	5
			student	2b	4
			stunt	9	3
s	T	B-D	suggestion	6	8
sacrifice	2b	5	surveyor	13	8
sausage	5b	4	swerve	7	7
scandalize	12	—			
scenery	7	5	t	T	B-D
scent	4b	5	tallow	8	5
sentinel	10	6	telescope	8	6
sexton	10	5	tenant	5a	5
shark	9	2	terrace	6	5
shift	3b	7	territory	3a	5
shilling	7	6	terror	2b	6
shiver	3b	3	tether	10	—
shred	8	7	thatch	8	7
shriek	3b	—			

# APPENDIX

thicket	4b	KU	vat	9	—
thoughtful	5a	4	vault	4a	4
thrifty	6	5	venerable	7	8
throb	15	—	venison	7	6
throng	3b	5	venture	3b	5
throttle	11	6	veranda	12	7
tranquil	6	6	vertical	6	7
transform	5a	7	viand	11	—
transparent	7	7	vineyard	6	5
tread	2b	2	violent	3b	6
treasure	2a	3	vision	3b	5
tremendous	5a	3	volcano	7	5
triangular	10	6	volume	3a	4
trim	2a	KU	vow	3a	4
trout	5a	2			
trudge	7	—	w	T	B-D
tunic	10	—	waft	6	—
tunnel	5b	KU	waggle	—	—
tureen	—	—	waistcoat	9	6
turmoil	11	—	wait	1a	KU
turntable	—	—	wander	2a	2
turret	6	—	warrior	3a	3
twilight	3b	3	wary	8	—
twine	4a	3	wayfarer	20	—
twitter	6	3	weapon	3a	4
			weary	2b	6
u	T	B-D	weird	6	—
umpire	9	5	wharves	8	—
unaccustomed	12	6	whinny	20	—
uncanny	—	—	whir	11	—
uncomfortable	5b	7	whisk	6	7
uncommon	6	7	whittle	14	—
unconscious	4a	6	whiz	9	5
ungrateful	5b	8	wicket	11	7
unoccupied	7	—	withdraw	3a	7
			wizard	5a	5
v	T	B-D	woodcraft	—	—
vacant	3b	6	writhe	9	—
valueless	16	—	wry	12	—



# INTERMEDIATE VOCABULARY

y	<i>T</i>	<i>B-D</i>	yonder	3a	5
yearn	5a	6	yule log	—	—
yeast	7	2			

## SELECTED VOCABULARY FOR GRADE SIX

a	<i>T</i>	<i>B-D</i>	atom	8	8
abandon	4a	6	audacious	11	—
abbey	6	7	august	18	—
abbot	7	7	authority	2b	6
abolish	5b	6	autograph	15	6
abound	5b	7	automatic	7	5
abyss	6	4	avenge	5b	3
accentuate	13	—	aviation	15	6
acute	7	7	azure	6	7
adaptation	8	—			
admiral	5a	6	b	<i>T</i>	<i>B-D</i>
admiration	4a	4	bacteriology	18	—
adverse	6	—	baffle	7	—
aerial	7	5	ballast	9	—
aeronautics	—	—	bandanna	7	7
agonize	12	—	barbaric	9	—
alabaster	9	8	barbecue	12	8
alacrity	12	—	barometric	—	—
allegiance	5b	5	barrage	16	—
allies	—	7	basis	4b	6
alpaca	19	6	baton	19	—
animate	6	8	bauble	10	—
annihilate	9	8	beam	2a	3
anoint	6	—	becalmed	15	—
antics	10	6	belfry	12	7
application	3b	6	besiege	5a	8
apprentice	9	7	bevy	13	—
arcade	15	—	bewitch	7	8
aromatic	8	—	bier	8	—
array	4a	6	bladder	8	8
artificial	5a	5	blemish	7	—
astronomer	8	7	blubber	11	6
astronomy	12	5	bobbin	18	7

# APPENDIX

bombardment	12	—	chemical	8	6
boon	5b	—	cherish	5a	—
booty	7	—	chink	7	3
bowsprit	17	—	chore	13	5
braggart	14	—	cinch	18	—
bramble	6	—	circuit	4b	6
brandish	8	—	circulate	8	—
brawny	14	7	citadel	10	—
brazier	16	—	citron	10	—
brigade	11	6	cloister	9	8
brooch	8	7	cloven	15	—
buffet	5b	KU	cockle	10	—
bulrush	12	8	codger	—	—
bunting	7	8	coffer	9	—
buoyant	8	8	collision	9	6
buzzard	11	7	comet	7	5
c	T	B-D	commend	3b	—
caisson	—	—	commodore	12	8
calculate	7	6	compact	5a	5
caliph	14	—	companionable	18	—
capsize	13	6	compartment	10	8
captor	17	6	competent	9	7
carat	15	—	competition	6	8
caravan	6	7	confine	4a	6
carbine	18	—	confirm	4a	5
castanet	—	—	confiscation	15	—
casual	6	7	conjecture	7	7
cataract	6	7	conscious	7	—
cavalcade	17	—	conservation	7	8
cavernous	16	—	constable	6	5
census	10	6	constructive	16	—
ceremony	4a	6	contrive	6	—
certificate	5b	5	coöperation	8	7
chamberlain	7	—	corduroy	12	6
champ	13	—	cornice	10	8
chandelier	13	6	counselor	8	8
chant	5a	—	coupling	9	—
chasm	8	7	courier	11	7
			crane	7	2

# INTERMEDIATE VOCABULARY

croon	14	6	divan	11	—
crucial	16	—	divert	7	7
crucible	13	—	divinity	6	8
cruiser	10	7	document	6	5
crystalline	12	—	dolphin	8	8
cylindrical	13	—	dormitory	12	4
cymbal	8	7	doublet	11	—
			dramatize	10	4
			drought	8	—
d	T	B-D	dullard	—	—
damask	11	—	dusky	6	7
damsel	5a	7			
data	10	2	e	T	B-D
dawdle	15	—	edifice	5b	—
dean	6	5	edition	6	5
decade	7	6	editorial	8	7
defiant	9	8	efficiency	9	6
deficiency	7	—	elapse	8	6
delegate	5b	7	eliminate	7	6
derelict	—	—	elusive	17	—
design	3a	KU	embalm	10	—
desolation	5b	6	emboss	10	—
desperation	10	—	emerald	7	5
detail	4a	7	emerge	6	7
determination	7	7	emergency	7	5
devour	4a	3	emit	9	—
dialogue	7	7	encounter	3b	7
diameter	8	4	endurance	8	7
diligent	5a	4	engrave	7	6
dingy	9	—	entreaty	8	8
dirigible	15	4	enunciate	16	8
disappointment	4b	4	episode	9	—
disaster	5b	4	escort	6	8
disciplinarian	—	—	essential	5b	5
discordant	10	—	establishment	5b	6
disembark	13	—	etch	14	3
distinction	3b	—	evaporate	8	3
distinguish	3b	6	eventide	12	—
distract	5b	5	exalt	4b	3

# APPENDIX

exaltation	12	—
exceeding	5a	—
excelsior	20	7
exertion	8	—
exhaust	4a	6
experiment	5a	6
exploit	5b	—
exposure	8	8
extensive	5a	7

<b>f</b>	<b>T</b>	<b>B-D</b>
faculties	5a	—
falter	6	7
fantastic	6	7
fascinate	7	7
fatal	3b	6
fawning	7	—
fertility	17	—
filament	8	—
filigree	8	—
fiord	13	6
flagon	14	—
flange	12	—
flaunt	9	—
flintlock	—	—
flounder	7	4
flourish	3b	6
flue	12	6
flume	—	—
flurry	12	—
font	12	—
forceps	15	8
ford	4a	5
foul	3a	5
fracas	20	—
fragile	8	5
fraught	7	—
freshet	16	—
friar	5b	3

fricassee	20	—
fruitless	7	—
fusillade	—	—

<b>g</b>	<b>T</b>	<b>B-D</b>
gala	16	—
gallery	4a	6
galley	8	6
garland	4a	7
gasket	—	—
gaunt	6	—
gauntlet	10	8
genial	4b	8
genius	3a	6
genuine	5a	5
gigantic	7	7
gill	7	2
girder	20	7
glacier	6	5
glade	6	3
globule	12	8
gnome	15	4
goad	9	—
gored	5b	—
gorge	6	5
gouge	16	—
gram	12	7
granular	11	8
grapple	9	8
greensward	14	—
grievous	5a	6
grotesque	8	—
grub	8	2
guidance	9	—
gusty	10	—

<b>h</b>	<b>T</b>	<b>B-D</b>
habitual	8	—
haggard	8	—

# INTERMEDIATE VOCABULARY

halo	15	2	immaculate	9	7
halyard	—	8	impend	8	—
hamlet	4b	5	imperious	8	—
hamper	8	5	implement	5a	6
handicap	8	4	impostor	9	7
harmonica	—	5	impressive	8	—
harpoon	17	5	imprint	12	—
hart	5a	2	impulse	7	—
haunch	10	—	incubator	11	8
haunt	3b	5	infancy	6	—
haven	5b	8	inflate	10	—
hawser	16	—	inmate	10	—
hazard	5b	8	inscription	7	6
haze	9	7	insolent	8	—
hearse	16	6	insolvent	16	—
heather	10	—	instantaneous	14	7
heave	3b	—	instruction	3a	4
hectic	14	—	integrity	7	7
heiress	14	6	intense	6	6
helium	19	8	invade	4a	6
helm	5a	5	invisible	4b	5
herald	5a	7	irate	—	—
heredity	10	—	iridescent	20	8
heroic	4b	6	irony	12	—
herring	8	3	irritant	9	—
hexagon	11	8	irritation	9	7
hieroglyphic	12	—	isolate	7	8
hilarious	17	8			
hospitality	7	7	j	T	B-D
host	2b	3	jag	13	—
hulk	9	—	jargon	14	—
hull	8	2	jasper	11	—
humane	7	3	jaunty	11	—
humiliate	9	8	jealous	3b	3
hydrogen	7	7	jerk	7	5
			jet	5a	3
i	T	B-D	jib	14	7
ignoramus	—	8	jonquil	18	—
illustrious	5b	—	journal	5b	5

# APPENDIX

jubilant	14	—	lee	4b	—
jubilee	6	—	legend	5b	6
judicious	8	8	liege	18	—
juncture	15	—	lilt	16	—
jury	6	5	liter	14	7
justify	4a	6	livelihood	8	8
juvenile	13	7	livery	5b	7
			loath	8	8
k	T	B-D	lobe	11	—
keel	8	7	locality	7	—
kernel	7	6	locust	6	6
kindred	4a	6	loiter	6	7
kine	10	—	lope	11	—
kingpin	—	—	lore	10	—
knapsack	16	3	lout	17	—
knave	4a	4	ludicrous	10	8
knell	4a	3	lurch	11	—
knelt	9	3	lure	5b	7
knoll	6	—	lurk	4a	—
knowledge	2a	3	luscious	18	7
knuckle	10	5	lusty	5b	—
			luxurious	7	8
l	T	B-D	luxury	3a	7
laboratory	8	5			
laborious	10	7	m	T	B-I)
laggard	12	—	mackerel	11	4
lair	8	2	majority	3a	6
lament	4a	7	malice	5a	5
larder	11	—	mandolin	18	6
larkspur	16	—	manifest	4a	7
larynx	13	8	mantle	3b	6
lath	14	—	martial	19	7
lattice	15	8	martyr	5a	6
laud	10	—	marvel	4a	5
lavish	5b	—	massive	7	6
lax	13	—	matron	6	7
lease	7	5	meager	7	—
lecture	4b	5	medical	5b	5
ledge	5b	4	meditate	5b	8



# INTERMEDIATE VOCABULARY

memorial	4a	4	nomination	6	6
menace	8	5	nondescript	16	—
mermaid	9	7	normal	5a	5
meteor	6	6	notary	9	7
metric	12	7	notation	13	7
mimic	9	7	notorious	7	—
miraculous	8	8	noun	10	5
monastery	9	7	novel	5a	6
monotonous	12	7	novelty	4b	6
monstrous	4a	5	novice	8	—
mortal	2b	7	nuzzle	—	—
mortality	7	8	nymph	5a	—
mosaic	9	6			
motif	15	—	o	T	B-D
motive	3b	—	oaten	15	—
mummy	9	7	objective	14	7
murderous	8	—	obligation	5b	—
mysterious	4b	6	oblivion	8	—
mythology	10	8	obscene	9	4
			observation	4a	6
n	T	B-D	obstacle	5b	7
nape	15	—	obstinate	5b	7
naphtha	14	8	obvious	7	6
narrate	12	7	occupant	8	8
narrative	7	7	oculist	16	7
nasal	9	8	offensive	7	7
nationality	8	5	onslaught	15	—
naturalist	12	7	opiate	13	—
nausea	15	—	opinion	2a	5
nauseate	19	—	opponent	7	7
nautical	12	—	oppose	3a	7
navigate	10	5	optimistic	17	8
negative	6	6	oracle	5a	—
niche	12	—	orator	6	7
nick	7	2	orchestra	5b	KU
nigh	4a	3	orchid	11	7
nitrogen	7	8	ordinary	3a	6
nocturnal	12	—	organist	9	5
nominate	8	6	organize	4b	5

# APPENDIX

original	3a	5	placid	7	—
oust	15	—	plague	3b	7
outwit	15	—	plastic	10	—
overwhelm	5b	7	plausible	11	—
oxygen	6	6	plight	5b	5
			pneumatic	12	—
p	T	B-D	poacher	19	—
pacify	11	8	politics	4a	7
pact	—	—	portal	6	5
palate	10	8	pose	9	2
pallet	13	—	precipice	7	7
palpitate	18	—	preface	8	6
palsy	9	—	prejudice	6	7
parachute	12	6	prelate	7	—
parchment	7	6	premium	7	6
parole	19	7	prescribe	4a	8
partial	5b	7	prescription	9	7
peat	19	3	prey	3a	7
pedestrian	12	7	primitive	7	5
pedigree	9	—	principle	3b	5
penal	12	8	prior	7	7
pension	6	8	portable	9	6
perceive	3a	6	portico	14	—
percentage	9	5	probe	10	—
percolator	20	—	product	2b	3
percussion	—	—	profession	5a	6
perplex	4b	7	profusion	13	—
persevere	7	7	prohibit	5a	6
personal	3b	4	project	5a	8
peruse	7	—	prominent	4a	6
pessimist	16	8	promote	6	4
pheasant	10	7	prophecy	5a	8
phosphorus	18	—	prospective	9	—
photoplay	—	—	prostrate	6	—
pinafore	15	—	protest	4b	4
pinion	8	8	prow	10	6
pinnacle	8	5	prudent	5a	—
piston	11	7	publish	3a	4
pithy	14	—	pun	13	2

# INTERMEDIATE VOCABULARY

purity	5a	4	rejoice	2a	6
pursue	2b	7	reluctant	7	8
pursuit	4b	6	repair	2a	3
			reptile	8	7
q	T	B-D	reserve	3	4
quaint	5a	2	resign	3b	6
quarry	5a	6	resinous	10	—
quartet	13	4	resist	4a	5
quaver	11	—	resonant	16	—
quell	6	—	resource	6	4
quest	5b	6	respect	2a	4
queue	—	—	reveal	3a	5
quicken	4a	3	reverse	4b	6
quince	14	7	review	2b	3
quiver	4a	—	revise	7	7
quoit	12	—	rind	9	2
quota	14	—	ringlet	9	—
			rivulet	7	8
r	T	B-D	rocket	9	5
rabble	8	7	roller	5a	KU
radiation	16	7	routine	8	7
radium	13	6	rural	3b	—
rafter	6	7			
raid	8	2	s	T	B-D
rampart	9	4	sage	4a	3
rapier	14	—	sanctuary	5a	8
ration	7	—	sapling	8	8
ravage	8	—	scabbard	9	—
realization	9	—	scaffold	7	8
reassure	8	7	scandal	6	4
recipe	9	6	scanty	5b	—
recline	7	8	scepter	4b	8
reconcile	4a	8	schedule	6	3
recount	6	—	scholar	4a	3
recruit	7	7	scientist	7	5
recur	9	—	scorn	3a	7
referee	17	7	scramble	6	3
reforestation	—	—	scribe	9	7
regale	14	—	scrimmage	—	—

# APPENDIX

scrutiny	12	—	spaniel	10	—
sculptor	8	7	spectacular	12	—
seclusion	13	6	sphinx	11	7
secretary	3b	5	spoil	2a	KU
sedate	13	7	spout	6	2
seedling	8	—	squeal	13	3
seep	17	3	squid	18	—
sensation	7	7	squirm	13	7
sentry	12	5	squirt	14	KU
serf	8	7	stadium	16	4
sewerage	19	—	stagnant	7	—
sheaf	6	7	stalwart	17	7
sheen	10	6	stanch	9	8
sheer	8	—	standard	2b	2
shellac	13	8	staple	7	7
shelter	2a	3	stationer	16	2
sheriff	6	4	statuary	10	6
shift	3b	7	stealthy	12	—
shoal	8	—	stenographer	10	5
shrewd	5a	7	stimulate	7	7
shrivel	10	—	stockade	10	5
shroud	5b	—	strategy	12	—
shuttle	11	8	strode	8	6
siege	5b	6	strove	5b	—
signature	5b	3	strut	6	6
silt	19	—	studio	11	6
simplicity	4b	3	sublime	5a	7
sinister	9	—	subtle	5b	8
skein	10	5	subway	10	3
skirmish	7	—	sucker	9	KU
slash	8	6	sunder	7	7
sledge	5a	4	superb	9	—
sliver	19	—	suppliant	9	—
sluice	10	—	surgeon	7	5
smite	4b	8	surgery	8	8
smooch	—	—	survive	5a	8
sober	3a	6	suspense	9	8
solemnity	7	—	swath	20	—
soluble	8	7	sympathetic	8	8
			system	2a	4

# INTERMEDIATE VOCABULARY

t	T	B-D	tutor	5b	6
tackle	7	6	typist	16	6
tallyho	—	—	u	T	B-D
tambourine	15	KU	underhanded	18	—
tango	—	—	undertake	3a	5
tank	4b	KU	unfortunate	3b	6
tanner	14	6	unique	9	7
tannic	19	—	unpalatable	—	—
tapestry	6	6	unstable	11	8
tarry	5a	5	unstrung	—	—
taunt	9	—	unwise	7	6
taut	8	—	upheaval	15	—
tawny	8	—	upright	3a	3
telegraphy	4a	6	uprose	11	—
temporary	5a	8	urge	2b	6
tense	17	7	utensil	7	5
tension	12	8	utilize	8	8
terrace	6	5	utter	2b	7
terse	19	—	v	T	B-D
test tube	—	—	vagabond	8	6
tether	10	—	vagrant	7	—
textile	10	6	vague	6	7
thorough	2b	5	valise	16	6
thresh	17	—	valor	5a	4
thrifty	6	5	valued	3a	—
throttle	11	6	vaudeville	17	5
tinker	16	3	vegetarian	18	—
token	4b	5	vehicle	7	5
toll	7	7	vellum	14	8
tourney	14	—	velocity	9	8
tow	6	2	vender	14	—
trammel	15	—	vener	11	8
transit	8	4	vengeance	4a	6
tremulous	7	—	ventilate	9	5
tropic	6	4	venture	3b	5
truce	11	7	verdant	11	—
tumult	5a	7	vermin	16	7
turbulent	7	—			
turmoil	11	8			

## APPENDIX

vesper	9	7	wane	7	3
vexation	6	—	wanton	4b	—
vibrant	14	—	weft	—	—
vicinity	6	5	weld	8	—
victim	4a	4	wheelde	11	—
violate	4b	6	whit	7	4
viper	7	7	wicker	13	5
vise	14	7	wigwag	—	—
vitamin	11	8	windlass	10	—
vivacious	14	8	wither	3b	4
vivid	5b	6	wobble	19	—
vocalize	6	—			
vogue	6	—	y	T	B-D
volunteer	7	5	yacht	11	5
vulcanize	18	—	yam	20	—
			yearling	13	8
w	T	B-D	yeomen	9	8
waddle	11	—	yield	2a	5
wafer	8	—	yolk	10	3
waffle	20	5	youthful	4a	8
wallop	18	6	yuletide	—	—
wallow	8	8			

### COMPARISON OF THE LISTS WITH OTHER WORD LISTS

The Thorndike rating of the words in each of the three lists is shown in Table 1. In each list words are found on all Thorndike frequency levels. While Thorndike suggested words in the third thousand of his list for fourth grade and in the fourth thousand for fifth grade, this study shows that no such section of the Thorndike list is assigned to any grade in actual use. The words in the fourth- and fifth-grade lists show almost equal range and frequency in terms of Thorndike thousands. A small percentage of the words in each grade list does not appear in the Thorndike list at all. One of the reasons for this lack of agreement between grade level and Thorndike thousand level is that the Thorndike list is primarily a count of adult literature and words used primarily in children's literature often appear so infrequently in adult reading as to appear at



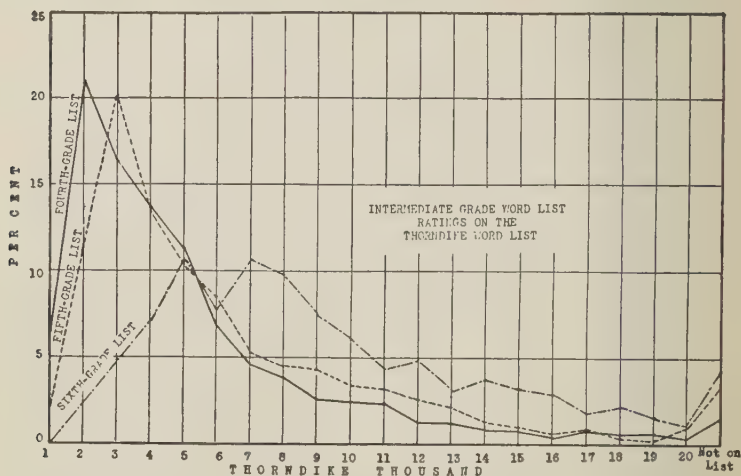
# INTERMEDIATE VOCABULARY

TABLE 1  
INTERMEDIATE-GRADE VOCABULARY LISTS DISTRIBUTED BY  
THORNDIKE THOUSANDS

THORNDIKE THOUSAND	GRADE IV		GRADE V		GRADE VI	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
1	46	6.6	11	2.1	0	0.0
2	145	21.0	60	11.4	20	2.4
3	113	16.4	106	20.2	41	4.8
4	95	13.7	71	13.5	61	7.2
5	78	11.3	54	10.3	91	10.7
6	48	6.9	45	8.6	66	7.8
7	32	4.6	28	5.3	91	10.7
8	26	3.8	24	4.6	83	9.8
9	18	2.6	23	4.4	64	7.5
10	17	2.5	18	3.4	52	6.1
11	16	2.3	16	3.1	37	4.4
12	9	1.3	14	2.7	42	4.9
13	9	1.3	11	2.1	26	3.1
14	6	0.9	7	1.3	31	2.7
15	5	0.7	5	1.0	27	3.2
16	3	0.4	3	0.6	25	2.9
17	5	0.7	4	0.8	15	1.8
18	4	0.6	2	0.4	18	2.1
19	4	0.6	1	0.2	14	1.6
20	2	0.3	5	1.0	9	1.1
No Rating	10	1.4	17	3.2	36	4.2
	691		525		849	

later Thorndike levels. Another reason for the lack of agreement is that there has been no standardizing agency to unify the vocabulary at these grade levels; authors of books choose whatever words they feel best express their ideas to middle-grade children.

A comparison of the intermediate-grade reading vocabulary lists with the Buckingham-Dolch Free Association Study appears in Table 2. Again, it is found that there is no close agreement between the grade assignments found in the reading materials and those assigned by Buckingham and Dolch. Perhaps the reason for the assignment of many words to the higher grades in the Buckingham-Dolch Study is that these words



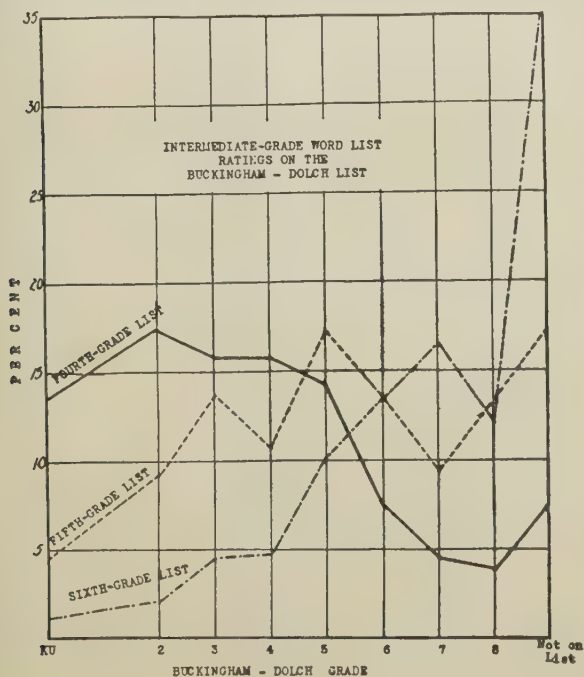
come into the child's writing vocabulary through the medium of his reading. It may require a year or more of reading experience with a word to give the child sufficient familiarity with the word to include it in his writing vocabulary. A higher Buckingham-Dolch grade assignment is, therefore, no sure indication that the word ought not to be included at some lower-grade level. However, there are a great many words which appear in the child's writing vocabulary, as shown by the Buckingham-Dolch list, before they appear in his reading vocabulary. These words with lower Buckingham-Dolch ratings are particularly significant for the teaching of reading, since it is probably true that the child has found need for the use of the word in the earlier grades. The method of the Buckingham-Dolch tabulation, however, permitted the inclusion of a word on the list if it was used by three or more children. The presence of a few extremely bright children in any grade might cause unsuitable grade assignments in this method of comparison.

# INTERMEDIATE VOCABULARY

## TABLE 2

BUCKINGHAM-DOLCH GRADE-LEVEL ASSIGNMENTS FOR WORDS ON EACH  
OF THE INTERMEDIATE-GRADE VOCABULARY LISTS

BUCKINGHAM- DOLCH GRADE	GRADE IV		GRADE V		GRADE VI	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
KU	94	12.6	24	4.6	9	1.1
2	121	17.5	49	9.3	18	2.1
3	109	15.8	72	13.7	38	4.5
4	109	15.8	56	10.7	40	4.7
5	98	14.2	91	17.3	86	10.1
6	51	7.4	71	13.5	115	13.5
7	31	4.5	49	9.3	140	16.5
8	26	3.8	23	4.4	103	12.1
No Rating	52	7.5	90	17.1	300	35.3
	691		525		849	



C. WORD GROUPINGS FOR EMPHASIS ON CERTAIN SOUNDS <sup>1</sup> AND PHONOGRAMS

1. ă

had	bag	ham	cat	can	cap
bad	tag	has	rat	ran	lap
sad	wag	have	hat	man	tap
add	rag	back	sat	fan	nap
mad	am	pack	at	pan	map
pad	jam		pat	an	rap

2. ā

cake	late	cave			
make	date	wave			
take	name	age	ate	made	race
lake	game	cage	gate	gave	case
rake	came	safe			
wake	same	face			

3. ai

pain	pail	maid	air
rain	mail	maiden	hair
train	nail	paid	airplane
plain	sail	afraid	stairs
gain	quail	paint	upstairs
tail	wait	faint	downstairs
		raise	fair
		raised	fairy
			pair
			chair

4. ake

make  
take  
cake  
shake  
bake  
wake  
lake  
sake

5. all

all	hall	small
ball	tall	smaller
call	taller	smallest
fall	tallest	
fallen	wall	
	walls	

6. and

and  
hand  
land  
sand  
stand  
grand

<sup>1</sup> See reference to this list in Chapter 9, page 229. The groupings were prepared by Dorothy L. Jones, Cambridge School, Cambridge, Massachusetts.

7. ar

are	arm	starting
far	car	started
hard	cart	march
card	barn	marching
garden	farm	large
yard	farmer	charge
dark	part	mark
bark	party	market
barking	star	sharp
park	start	

8. au—aw

caught	draw	shawl
taught	drawing	crawl
naughty	drawn	claws
daughter	drawback	awful
saucer	hawk	awfully
because	law	gnaw
cause	lawn	gnawed
saw	straw	jaw
paw	strawberries	dawn

9. ay

day	say	maybe
today	lay	Sunday
hay	pay	Friday
play	gay	Wednesday
playing	gray	Monday
played	clay	Thursday
way	yesterday	Tuesday
ways	pray	Saturday
away	stay	
always	staying	
may	stayed	

10. ce			11. ch		
ice	since	race	children	cherry	teach
nice	prince	races	child	chop	teacher
mice	piece	place	chair	church	rich
rice	dance	places	chicken	each	which
twice	voice		chick	much	
slice	fence		change	such	
price	face		cheese	lunch	
once	faces		chase	inch	

12. ě			13. ē		
bed	tell	yet	he	be	see
bell	red	beg	me	she	bee
egg	ten	led	we	free	tree
leg	wet	wet			
hen	well	less			
men	yes	pet			
den	set	web			
get	fed	met			
fell	let	sell			

14. ea		
eat	neatest	squeals
eaten	neatly	dream
beat	east	dreaming
beaten	Easter	dreamed
beating	least	easy
seat	peanut	easiest
seated	pea	easier
heat	leaf	speak
meat	leaves	speaking
neat	sea	squeak
neater	squeal	squeaking
	squealed	

15. each		
each	teach	preach
reach	teacher	preached
reached	teaching	preaching
reaching	peach	beach
	peaches	beaches



16. ear

ear	dear	near	year
fear	dearest	nearer	yearly
fearing	hear	nearest	tear
feared	hearing	nearly	tears

17. ee

see	keep	meet	wheel
seen	deep	sweet	teeth
seem	deeper	street	week
seed	sleep	green	between
bee	sleepy	feed	indeed
tree	sleeping	need	geese
free	asleep	needle	cheese
knee	sheep	feel	

18. er

mother	everything	supper
other	everybody	letter
another	after	newspaper
brother	afternoon	cracker
sister	afterwards	over
father	paper	cover
ever	flower	covered
whatever	butter	matter
however	buttercup	river
butterfly	stranger	older
never	better	faster
every	dinner	louder
everyone		

19. ew

new	chewed	dew
knew	news	chew
mew	newspaper	chewing
blew	flew	grew
threw	screw	

20. ge

page	cage
charge	change
bridge	orange

21. ĭ

pig	lip	him	pin	will
big	tip	six	win	hill
dig	pick	fix	miss	fill
in	kick	mix	kiss	mill
till	did	sit	fit	
bill	hid	it		
if	lid	bit		
is	kid	hit		

22. ī

ice	fine	nice	rise
kite	five	wide	ripe
mice	nine	mine	wise
ride	knife	bite	write
time	line	life	tie
hide	mile	rice	die
like	lie	wife	

23. ie

pie	tie	cries	tries
lie	ties	cried	tried
flies	die	skies	replied
dried	died	satisfied	

24. ight

right	midnight	mighty	daylight
night	bright	light	
slight	tight	fright	
frightened		moonlight	

25. ind

kind	unkind	kindness
unkindness	kindly	hind
behind	mind	remind
reminded	find	finding
wind	winding	blind
blindness	grind	grinding

26. ing

sing  
bring  
string

going  
coming  
hopping  
trying  
singing  
bringing  
stringing

ring  
swing

running  
getting  
doing  
flying  
ringing  
swinging

27. ir

bird  
girl  
blackbird  
shirt  
stir  
whirling

birthday  
first  
circus  
third  
stirs

bluebird  
dirty  
dirt  
thirsty  
whirl

28. nd

and  
hand  
handle  
sand  
stand  
kind  
mind  
hind  
pound  
pounding

understand  
candle  
grandmother  
grandfather  
second  
round  
around  
ground  
sound  
sounded

end  
ended  
send  
sending  
friend  
find  
wind  
pond

29. nt

went  
want  
ant  
elephant  
hunt

cent  
wanted  
aunt  
planted  
hunted

sent  
wanting  
plant  
planting  
hunting

# APPENDIX

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## 30. o

not	box	log	hog	home	rope	wrote
got	hot	lot	rock	hole	toe	
lock	top	hop	fox	bone	hope	
ox	nod	on	doll			
toss	dog					

## 31. ō

## 32. oa

boat	road	coasted	coasting
coat	load	float	soap
goat	toad	floated	oak
coal	roast	floating	cloak
cocoa	roasted	boast	cloakroom
oats	coast	boasted	

## 33. old

old	older	oldest
told	sold	hold
holding	cold	colder
coldest	bold	boldly
gold	goldenrod	fold
scold	scolded	folded
unfold		

## 34. ōo

book	cook	woodpecker
cooky	cooked	woodman
foot	good	bookkeeper
good-by	wood	brook
hood	stood	understood
took	look	undertook
looked	looking	overlook

35.  $\bar{o}o$

room	cool	broom
bedroom	cooler	broomstick
moon	coolest	droop
moonlight	fool	drooping
root	school	smooth
shoot	foolish	smoother
stool	schoolroom	smoothly
sooner	soon	noon
afternoon	goose	loose
choose	rooster	balloon

36. ook

book	look	cook	took
shook	hook	brook	looking
cooked			

37. or

corn	store	hornet	porch
corner	story	torn	door
morning	wore	born	floor
fork	tore	short	storm
horse	forget	shorter	stormy
for	forgot	shortest	before
horn	more	north	sort

38. ou

out	louder	around
outside	loudest	pound
without	cloud	pounded
about	cloudy	ground
house	shout	underground
mouse	shouts	sound
loud	shouted	sounded
loudly	round	our
ourselves	flour	hour
mouth	south	mountain
fountain		

39. ould

would

could

should

40. ow (ō)

low	snowballs	grown	showed	grow	grown	arrow
lower	know	flow	snow	growing	window	throws
below	known	flown	yellow	fellow	follow	throwing
bow	row	slow	hollow	swallow	tomorrow	
bowl	rows	slowly				
showed	crow	throw				

41. ow

now	cows	nightgown
how	down	owl
however	town	crowd
somehow	downstairs	crowded
howl	flower	brown
howled	flowers	brownish
howling	showers	frown
cow	gown	frowning
growl	growled	plow
plowman	plowing	

42. oi—oy

boy	boil	pointed
toy	boils	pointing
boys	boiling	join
toys	oil	joint
joy	spoil	noise
enjoy	spoiled	voice
enjoyed	spoilng	
enjoying	point	



43. sh

she  
shall  
show  
ship  
sheep  
shoe  
shop  
shut

shake  
should  
shell  
shine  
dish  
fish  
wish  
wishing

wash  
washed  
washing  
splash  
splashed  
brush  
brushes  
brushed  
brushing

44. st

nest  
best  
west  
almost  
postman  
frost

must  
just  
first  
past  
lost  
taste

best  
most  
last  
fast  
east  
tasted  
tasting

45. tch

catch  
catches  
catching  
match  
matched  
matches  
patch  
patches

scratch  
scratching  
watch  
watches  
watched  
watching  
witch  
witches

stitch  
stitches  
ditch  
ditches  
stretch  
stretched  
stretching  
notch  
notches

46. th

thing  
thank  
think  
that  
the  
this  
these  
those

three  
then  
them  
there  
their  
they  
than  
with

mouth  
mother  
farther  
father  
brother  
grandmother  
grandfather

47. ŭ

run	cut	bug
sun	but	rug
fun	nut	tug
gun	hut	tub
up	duck	rub
cup	us	mud
gum	hum	

48. wh

when	why	what
which	where	white
while	wheel	whip

49. ur

hurt	curl	surprising
turkey	curled	turning
turn	fur	furnish
return	church	returned
returning	purple	turtle
burn	burst	surprise
surprised		

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